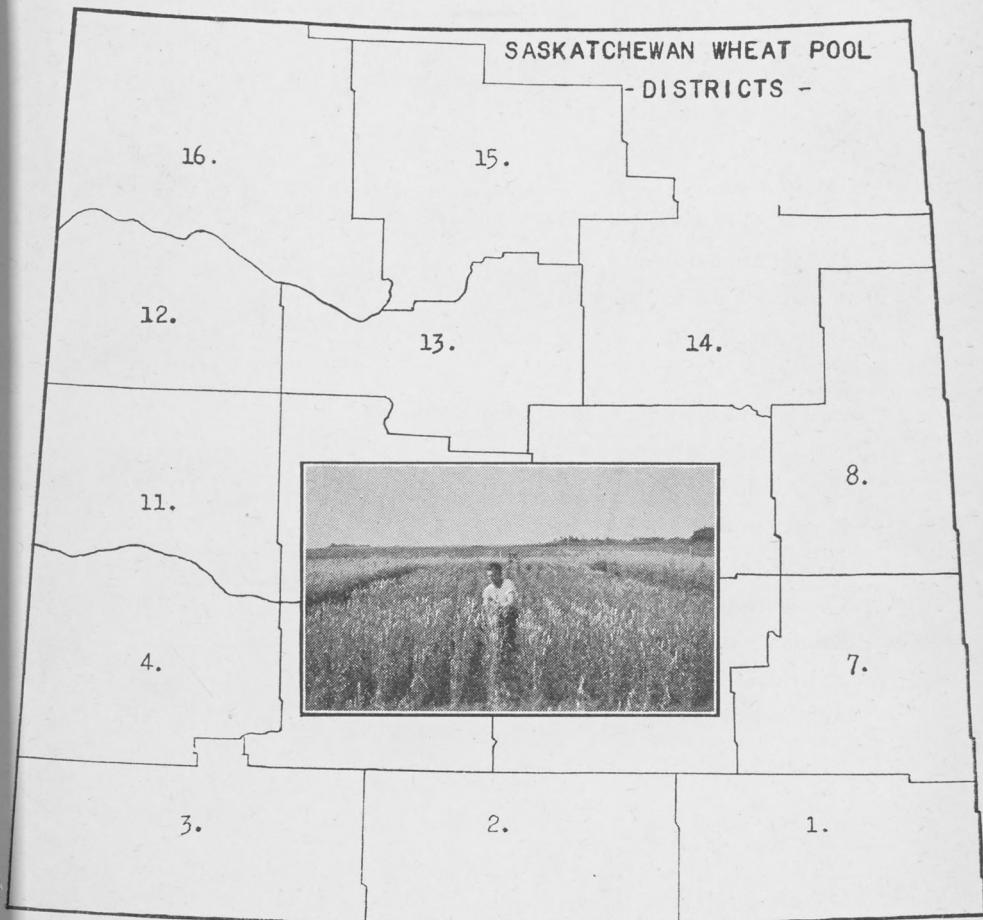


SASKATCHEWAN WHEAT POOL

Junior Co-operative Wheat Variety Tests 1936



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CONTENTS

	<i>Page</i>
Foreword.....	3
Introduction.....	4
Map of Cereal Variety Zones.....	6
Precipitation Table.....	7
Varieties Used in Experiment.....	9
Location of Plots.....	10
Summary of Yields.....	12
Histograms Showing Comparative Yields.....	15
Days from Sowing to Ripening.....	15
Height of Plants.....	16
Straw Strength.....	16
Weight per Measured Bushel.....	18
Commercial Grades.....	20
Summary of Results.....	22
Individual Results by Wheat Pool Districts.....	23
Acknowledgments.....	47

FOREWORD

DOWN through the ages since first the early agriculturists called upon their Gods to save the stricken crops, drought and rust epidemics have brought untold tribulation and distress. The superstitions of the ancients have long since been swept into the wake of time, and scientific research has made enormous contributions toward combating the enemies which attack the labour of the farmer. But there still remains much to be accomplished and any effort, no matter how small it may be, leading to a discovery which may lessen the load carried by those who wrest their livelihood from the soil, is one which must not be lightly regarded.

The Saskatchewan Wheat Pool, in co-operation with the University of Saskatchewan and the Dominion Experimental Farms, have sponsored this Wheat Testing experiment in the hope that some worthwhile information may be obtained for the farmers of Saskatchewan of the general characteristics of Thatcher rust-resistant wheat as compared to other standard varieties, and also acquaint them of those wheats most adaptable to the different sections of the Province. These experiments could not have been undertaken without the assistance of our Junior Co-operators, and to all those who have assisted us in this undertaking, we extend our sincere thanks.

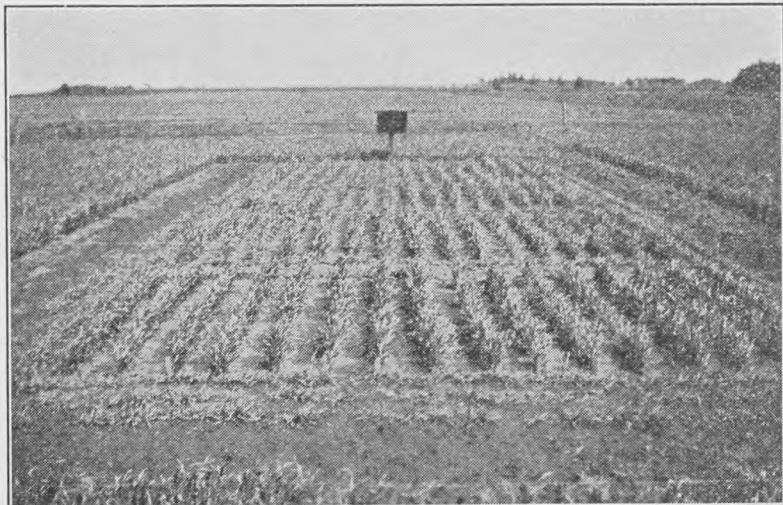
INTRODUCTION

THE disastrous rust epidemic of 1935, which brought untold losses to the farmers of Western Canada, again called attention to the vital necessity of a widespread use of a rust resistant wheat. That the variety used should be merely rust resistant was not, of course, sufficient. It should be able to compare favorably with other standard varieties in so far as its all-round qualities are concerned. Its resistance to diseases other than rust must be of a high nature, and its milling and baking qualities must be able to satisfy all requirements.

For many years plant breeders have been conducting experiments with a view to developing a rust resistant hard spring wheat, with other characteristics at least equal to the well established varieties. In the early stages of these experiments many disappointments were experienced. The only rust resistant parents known at this time were durum wheat and emmer, and crosses between either of these two and the common wheats involved sterility. Great advances were made, however, in 1919, when resistance was discovered in "Kota" wheat, a common hard spring variety. With this discovery, many of the difficulties experienced in the past were partly overcome. The resistance in Kota, however, was not sufficiently high to ensure against all possibility of loss. It was also found that, in some cases, only relatively few, and in other cases none, of the hybrid plants were as resistant as the parents.

Since the discovery of resistance in Kota, many valuable contributions have been made to an understanding of the inheritance of resistance, and much has been accomplished in the development of varieties which are nearly immune to rust infection. With the distribution of "Thatcher" wheat by the Minnesota Experimental Station in 1934, great advances had been made, and a new variety was available which gave promise of near immunity to stem rust, and with many other characteristics which were apparently at least equal to the standard varieties. Distribution of this new variety was first made in Canada by the Government of Manitoba in 1935, the seed being obtained from a farmer in Southern Manitoba who had propagated a small quantity originally secured from Minnesota.

Whilst this new wheat was highly rust resistant and its yielding, general characteristics, milling and baking qualities, gave every promise of being equal to the standard varieties, only limited information was available as to its ability to withstand drought and disease other than rust under field conditions throughout the different sections of Saskatchewan.



Saskatchewan Wheat Pool wheat variety testing plot located at Rosthern and supervised by Mr. Edward Lewis Tadei.

That information of this nature was vitally necessary before recommendations could be made for the extensive use of the new variety will, of course, be apparent. To collect the necessary data an extensive wheat testing project was planned by the Saskatchewan Wheat Pool, to be undertaken in the spring of 1936. The primary purpose of this wheat testing project was, of course, to discover the behaviour of "Thatcher" wheat under both rust and non-rust conditions, but the experiment was also planned to secure information regarding the yielding capacity, disease resistance and general agronomic qualities of other varieties when sown under the different conditions which obtain in the various soil climatic zones of Saskatchewan.

Lack of precipitation and record-breaking high temperatures over large areas of the Province unfortunately resulted in the abandonment of many plots in the most severely affected territories, and in other districts drought and intense heat caused considerable premature ripening. Stem rust was again apparent in nearly two-thirds of the wheat growing regions of Saskatchewan, but climatic conditions greatly assisted all varieties to escape serious injury. In giving consideration to the data collected, due regard must necessarily be given to the severity of the weather which prevailed during the growing season, and the reactions of all varieties in comparison to their behaviour in a year of normal rainfall and average temperatures.

VARIETIES USED IN THE EXPERIMENT

Six varieties were selected for the test. Marquis, Thatcher, and Reward, were used in all testing plots. The fourth variety was selected from Ceres, Reliance or Garnet, distribution being made according to the suitability of the variety for the particular area in which it was to be sown. Thus Ceres was the fourth variety selected for the Wheat Pool Districts 1, 6, 7, 8, 9, 12 and 13, an area running diagonally across the centre of the Province, commencing in the South-east corner, and ending at the Alberta border between townships 34 and 46. Reliance constituted the fourth variety in Wheat Pool Districts 2, 3, 4, 5, 10 and 11. This area represents the South-western portion of Saskatchewan, with additional territory reaching into the centre regions of the wheat growing area of the Province. Garnet was selected as the fourth variety in Wheat Pool Districts 14, 15 and 16. These districts represent Saskatchewan's most northerly wheat growing regions.

LOCATIONS OF TESTING PLOTS

The Saskatchewan Wheat Pool, for the purpose of administration, has divided the Province into 16 Districts. In turn each District is divided into ten sub-districts. In each of these sub-districts two plots were located, and in this manner the test consisted of 320 plots extending to all the grain growing areas of Saskatchewan, as shown on page 10.

METHOD EMPLOYED IN SOWING THE TEST PLOT

Each plot was sown in the form of a latin square in soil representative of the surrounding district. The size of the plot was 25 ft. by 60 ft., allowing for 16 plots of 4 rows each, 12 inches apart, and also allowing for pathways and an outside protection of winter wheat. Around the test plot, at a distance of about 3 ft. from the outside row of winter wheat, two or more drill rows of oats were sown as a wind protection, and a saw-fly trap. The whole plot was divided into sub-plots or sections, with a separating pathway 2 ft. wide between each. Four rows, 10 ft. long, of each variety to be tested were sown in each section, the four varieties being assigned to the section at random with two restrictions, viz., a variety occurred only once in a section, and the position of each variety was changed in each section. The depth of seeding was from $2\frac{1}{2}$ " to 3", and efforts were made to place the kernels uniformly at distances of $1/3$ " to $2/5$ " apart.

ORGANIZATION AND CO-OPERATION

The success of the experiment depended almost entirely upon three factors, *i.e.:*

- (1) Each plot must be sown exactly in accordance with the prescribed plan.
- (2) All reports showing the progress of each variety, during the growing season, must be accurately completed on the dates designated.
- (3) Every care must be taken to preserve the identity of each variety at the time of harvesting by adopting proper methods in parcelling and labelling.

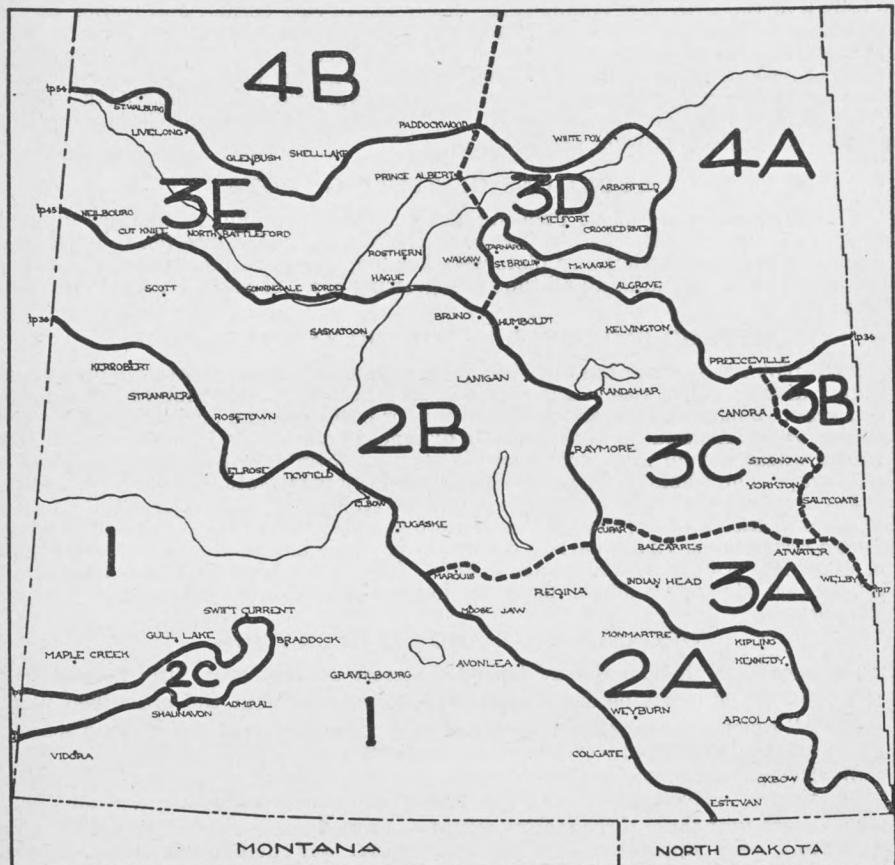
To ensure that these three factors would be carried out carefully, selected Junior Co-operators were appointed as Plot Supervisors, and detailed information was forwarded to each in connection with the seeding of the plot, the methods to be employed in reporting, and the proper procedure to adopt when harvesting the different varieties.

In order to avoid any possible error in seeding the varieties according to the plan already outlined, sufficient seed for each row was weighed out at the Head Office of the Saskatchewan Wheat Pool, and placed in envelopes numbered from 1 to 64, inclusive, thus the envelopes marked 1 to 4 contained the four rows of the first variety to be sown in section one of the plot, envelopes marked 5 to 9 contained the seed of the second variety to be sown in section one, and so on down to the envelopes marked 60 to 64, which contained the last variety to be sown in section four of the plot.

All junior co-operators were requested to furnish full reports covering the characteristics of each variety three times during the growing season. The first progress report was required to be forwarded to the Head Office of the Saskatchewan Wheat Pool by June 15th. A second progress report was required by July 15th, and the third and final report was requested by September 1st. To supplement the reports of the Junior Co-operators, officials of the Dominion Experimental Farms and Wheat Pool district representatives and elevator agents of the Saskatchewan Pool Elevators Limited made two inspections of each plot. One of these inspections was made during the growing season, and the other at about the time of harvest.

HARVESTING

Instructions were given to harvest only the two centre rows of each variety in the sub-plots, parcelling them in the paper provided for the purpose, and marking each bundle with particulars of the variety, the two row numbers, and the name of the co-operator. When harvesting operations, covering the entire plot, had been completed, all sheaves required for further experimental purposes were placed in gunny sacks and forwarded to the nearest Dominion Experimental Farm for threshing.



CEREAL VARIETY ZONES

SOIL AND CLIMATE

The soils in the different sections of Saskatchewan differ widely. In the soil surveys conducted by the Department of Soils, University of Saskatchewan, Saskatoon, the area has been divided into four major soil zones, corresponding closely to the regions of natural vegetation which, in turn, are related to the broad climatic differences existing in different parts of the Province.

Generally the soil zone map has been accepted as the basis for the cereal variety zones, as the cereal boundaries follow closely those of the soil zone. Owing, however, to comparatively small differences in precipitation, summer temperatures, and length of frost-free season, it has been necessary to divide some of the zones.

In the "Guide to Saskatchewan Agriculture," 1936, the general character of the cereal zones are described as follows:

Zone 1.—Brown soils; the short grass prairie region.

Zone 2.—Dark brown soils; the intermediate prairie region. Section A has a higher summer temperature, more precipitation, and a slightly longer season than Section B. Section C is cooler, has a shorter frost-free season, and has more precipitation than Section B.

Zone 3.—Black soils; the tall grass park region. Section A has a higher summer temperature, higher precipitation, and slightly longer season than Section C. Section B is characterized principally by a deeper, darker soil, and a shorter frost-free season than that of C. Section E, compared with D, is distinctly drier, with more favorable harvest weather, and the soil is lighter and shallower.

Zone 4.—Grey soils; wooded region. Section A is more subject to stem rust than Section B.

While definite zones make necessary the exact location of boundary lines, it should be pointed out that a line separating two zones is arbitrary, and that a tolerance of several miles one way or another is allowable with respect to variety recommendations. In addition, attention is drawn to the fact that in each zone there are many local areas which differ widely from the average for the zone. Some of these areas have light sandy soil, others have heavy wet soil, some are at a higher elevation than the surrounding country and receive extra precipitation, others may be low lying and subject to frequent early frosts.

ANALYSIS OF DATA

In order that a study may be made of the yielding capacity, disease resistance, and general characteristics of each variety grown in the test under the different soil and climatic conditions of Saskatchewan, all data in connection with the tests were analysed in areas represented by the Cereal Variety Zones already mentioned and illustrated on page 6.

RAINFALL AND TEMPERATURES

During the growing season of 1936 Saskatchewan experienced long, almost rainless periods, with extremely high temperatures.

TABLE 1—**Average total precipitation and average heaviest precipitation for months of April, May, June and July, 1936, in Saskatchewan Cereal Variety Zones with number of stations reporting in each zone.**

	No. of Stations Reporting	Average Total Precipitation				Average Heaviest Precipitation			
		April	May	June	July	April	May	June	July
Cereal Variety Zone 1.....	19	.38	1.52	1.73	.76	.22	1.03	.82	.42
Cereal Variety Zone 2A.....	8	.52	2.08	2.12	1.64	.38	1.40	.84	.60
Cereal Variety Zone 2B.....	18	.45	1.63	2.62	.83	.24	1.15	1.14	.37
Cereal Variety Zone 2C.....	1	.50	1.21	2.64	.64	.20	1.02	1.04	.35
Cereal Variety Zone 3A.....	3	.65	1.53	2.82	1.47	.30	.57	.79	.84
Cereal Variety Zone 3B.....	1	1.38	1.23	3.74	2.45	.50	.50	.84	1.64
Cereal Variety Zone 3C.....	5	.49	1.67	3.24	1.46	.22	.76	1.21	.71
Cereal Variety Zone 3D.....	3	.88	1.01	2.21	1.00	.51	.30	.93	.51
Cereal Variety Zone 3E.....	7	.53	.57	2.36	.91	.22	.19	.74	.53
Cereal Variety Zone 4A.....	1	.67	2.81	3.48	1.56	.20	.65	1.44	.55
Cereal Variety Zone 4B.....	1	.28	.42	2.79	*	.09	.12	.81	*

* No information.

Note.—The precipitation figures are obtained from meteorological reports furnished by the Provincial Government and cover only those stations shown in the reports. No information covering the average precipitation throughout each cereal variety zone is available.

In the last week of May a number of points in the western areas reported high temperatures of over 100 degrees. In the last week of June temperatures of over 100 degrees were again reported over the major portion of the Province, and in the early part of July, meteorological reports show that new records for the highest temperatures ever recorded were established at some points in the south-eastern areas, other districts showing that the differences from normal mean temperatures were from seven to seventeen degrees above normal during this time.

As the amount of rainfall during the growing season is a much more influential factor in wheat yields than the amount of the annual precipitation, the rainfall shown in table 1 covers only the months representing the growing period of wheat in Saskatchewan (April 1 to July 31). This table is arranged in Cereal Variety Zones, and in addition to the total rainfall for each month, shows the total number of stations reporting in each zone, and the amount of the heaviest precipitation in the month.



VARIETIES USED IN THE EXPERIMENT, with particulars of their accepted economical qualities and general characteristics.

(From the *Handbook of Canadian Spring Wheat Varieties, Department of Agriculture, Dominion of Canada, September, 1936.*)

MARQUIS—Ottawa 15 (C.A.N. 1396)

Origin: Marquis is a descendant of a cross made in 1892 by officials of the Central Experimental Farm, Ottawa, Ont., between an early ripening wheat, obtained from India under the name of Hard Red Calcutta, and Red Fife. It was isolated in 1903 by Dr. (now Sir) Charles E. Saunders, then Dominion Cerealist, and was first sent to Western Canada for trial on branch farms in 1907.

Description: Head beardless; chaff white and smooth, and held more closely than in Red Fife; kernels red and hard; medium early maturity; straw stiff, and of medium length; susceptible to rust (*Puccinia graminis tritici*). Marquis resembles Red Fife quite closely, being distinguished chiefly by shape and density of head, "spread" of tip awns, shape of glumes and length of "beak." It also requires from a week to ten days longer for Red Fife to ripen.

Milling and Baking Qualities: When grown under favourable conditions, Marquis mills freely into a flour of good color which, in turn, produces strong, elastic doughs of the best type, not only for baking into "well piled" loaves, but for blending with weaker wheats. For many years this variety has been taken as the standard of quality upon which our highest grades of wheat are based.

Status and Distribution: The ability of Marquis to mature several days earlier and to resist lodging better than Red Fife, coupled with its superior yielding capacity, caused it to supersede the latter variety with amazing rapidity until it occupied, by 1928, probably 80-90 per cent. of the area devoted to spring wheat in Western Canada. Since that date, however, it has been superseded to quite an extent in parts of Manitoba by Mindum, Ceres and Reward varieties, and in northern areas of the prairie provinces by Reward, Garnet and Red Bobs. It is grown to a limited extent in Eastern Canada and in British Columbia.

CERES—(C. A. N. 1263)

Origin: This variety originated from a cross between Kota and Marquis, made at the North Dakota Experimental Station, in 1918. It was introduced into Canada for trial by the Dominion Experimental Farm, at Brandon, Manitoba, in 1924, from which Farm it later was made available for trial by farmers.

Description: Bearded; chaff white and smooth, bearing slightly inturned beaks which are broadened at the base, and which vary considerably in length from $\frac{1}{8}$ " to $\frac{1}{2}$ "; kernels red, but very susceptible to bleaching; straw not quite so strong as Marquis, but of same length; ripens slightly ahead of Marquis, and frequently excels it in yield of grain. Is more resistant than is Marquis to the common forms of stem rust, but is not capable of withstanding a severe epidemic such as that of 1935. It is susceptible to leaf rust and smut.

Milling and Baking Qualities: Ceres is a high quality spring wheat, being classed with Marquis in this respect. Like Kota, it is particularly noted for the ability of its flour to absorb water.

Status and Distribution: Ceres has been gaining headway in southern Manitoba and southeastern Saskatchewan, especially on account of the good yields realized when conditions permit. It is better adapted to stubble than to fallow land, since it is liable to lodge on the latter.

RELIANCE—C.I. 7370, Sask. 1851 (C. A. N. 1498)

Origin: Reliance was developed by the United States Department of Agriculture in co-operation with the Oregon, California, Montana, North Dakota and Minnesota Experiment Stations from the cross, Kanred x Marquis, made in 1917.

Description: Head bearded; chaff white and smooth; beaks sharp, averaging about $\frac{1}{8}$ " in length; kernels red and hard; straw of medium length, strong and generally white in color; grains held moderately firmly in the head; matures about the same time as Marquis; vigorous in growth and high in yield.

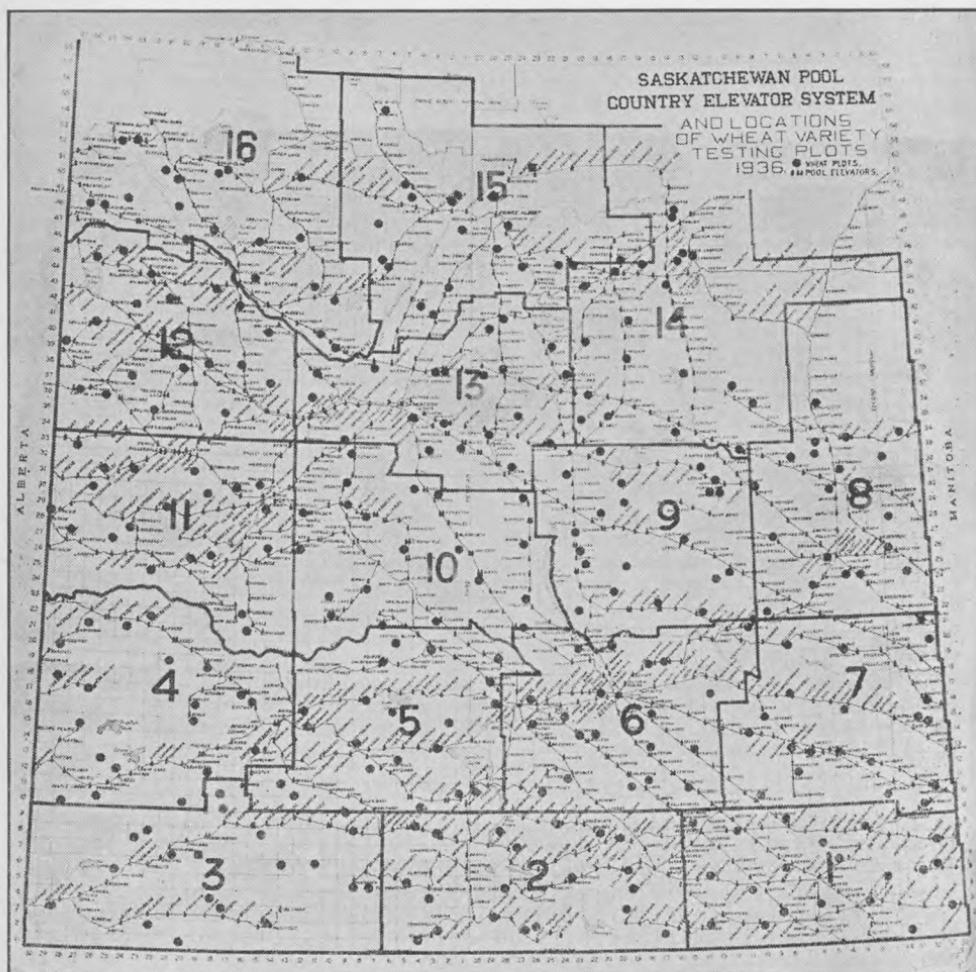
Milling and Baking Qualities: Reliance has been higher than Marquis in weight per bushel, and in percentage yield of flour, but slightly lower in percentage protein and in baking strength. The flour is slightly yellower than that of Marquis.

Status and Distribution: Grown to a limited extent in Western North Dakota, and in Montana, and in 1933 recommended by the Saskatchewan Seed Board for trial in southwestern Saskatchewan on account of its relatively high yielding capacity under drought conditions.

THATCHER—(Minn. 2303) (C.A.N. 1820)

Origin: Thatcher was produced from a cross made in 1921 at the Minnesota Agricultural Experiment Station, University of Minnesota, St. Paul, Minnesota, between (Marquis x Lumillo) x (Marquis x Kanred). The primary aim was to obtain a wheat of high quality for milling and baking purposes that was resistant to black stem rust and of desirable agronomic type. From one of the original crosses (Marquis x Lumillo) a bread wheat type was obtained with a considerable degree of resistance to stem rust under field conditions. From the Marquis x Kanred cross, a spring wheat was selected of good milling and baking qualities that was immune to several forms of black stem rust, and of high yielding ability. Thatcher originated from a cross between these two.

Description: Head resembles Marquis fairly closely, but is somewhat shorter and denser. It also has a tendency to be slightly crooked, chaff white and smooth; the glumes are oblong in shape, about twice as long as wide; shoulders square; beaks acute,



Map of Saskatchewan Wheat Pool Districts
Showing Locations of Plots

REWARD—Ottawa 928 (C.A.N. 1509)

Origin: Reward is the result of a cross made in 1912 at the Central Experimental Farm, Ottawa, between Marquis and the very early maturing variety Prelude. It was first released for trial by farmers in 1928.

Description: Head rather "ragged" in appearance and bald except for a few short tip awns which are dark in colour toward the base; chaff white with a sparse covering of very fine hairs; kernels hard, very plump and dark red when fully ripened but otherwise have a tendency toward a greenish bronze cast which not infrequently degrades the sample; straw medium long and very stiff; suffers less than Marquis from attacks of stem rust; matures five to eight days earlier than Marquis; threshes easier than Marquis but does not shatter readily; quite susceptible to both loose smut and bunt.

Milling and Baking Qualities: Reward excels in those characteristics which distinguish a good wheat of the Manitoba Northern type. It is consistently higher than Marquis in weight per bushel, protein content and baking strength.

Status and Distribution: Reward enjoys an enviable reputation as an early wheat and as a wheat of unusual quality and weight. Unfortunately, it falls short in yielding ability except in certain more or less restricted areas such as the Red River Valley and in certain sections of the Park Belt across the north. Generally speaking, it is probably safe to say it has been gaining steadily in popularity especially since growers began to sow it more heavily. Since its introduction, it has been a consistent championship winner at the International Hay and Grain Show at Chicago and at other seed exhibitions.

about 1/16" long, broad at the base and curving inwards; kernels red and hard, but smaller than Marquis, and somewhat dull in color; straw of medium length, exceptionally strong and white in color; matures a few days earlier than Marquis, but later than Reward; moderately resistant to black stem rust in the field, but very susceptible to bunt and leaf rust. Has excelled Marquis in yield over a three-year period in most parts of the prairie provinces.

Milling and Baking Qualities: Equal to Marquis in baking strength, but slightly yellower in flour color.

Status and Distribution: A promising new wheat released in the spring of 1934 when 2,000 bushels were distributed by the Minnesota Experiment Station to approved growers of the Minnesota Crop Improvement Association. This variety was distributed first in Canada, in the Autumn of 1935, by the Government of Manitoba. The seed was obtained from a farmer in southern Manitoba who had propagated a small quantity originally secured from Minnesota.

GARNET—Ottawa 652 (C. A. N. 1316)

Origin: This variety is the result of a cross made at the Central Experimental Farm, Ottawa, 1905, between the two Ottawa varieties, Preston A x Riga M.

Description: Head lax and bald, except for a few short tip awns; chaff white, smooth, long and soft in texture; beak very fine and sharp, about $\frac{1}{8}$ " length, usually longer, thinner and sharper than Marquis; straw white, and of good length, but not as strong as Reward; matures usually from one to three days earlier than Reward; the grain, which is usually longer and thinner than the latter variety, ripens and colors well in stood; very susceptible to rust, but considered the most resistant to smut of any variety now commonly grown in Canada; shatters rather readily. The germ is set in the kernel at a very oblique angle.

Milling and Baking Qualities: Garnet exhibits somewhat different milling characteristics than Marquis, requiring as it does to be tempered or conditioned differently for best results. It also mills into a flour which is more yellow in color than Marquis. Judged by crude protein content, loaf volume and a tendency toward a shortness in the dough, it is not entitled to rank with Marquis in baking qualities. The northern areas of Alberta and Saskatchewan, where Garnet is most suited agronomically, are not conducive to the production of high quality wheat, and under these conditions, the poorer baking strength of Garnet in relation to Reward is accentuated.

Status and Distribution: Since its distribution in the spring of 1926, Garnet has come to occupy an important place among the leading wheat varieties in those sections where early frosts are most feared.

* * *

ADVANTAGES OF LATIN SQUARE METHOD

The Latin Square arrangement of plots was used for all the tests. This arrangement placed the four plots of each variety in such a way as to allow the very greatest accuracy in varietal comparisons. This is accomplished by eliminating the effects of systematic soil variability mathematically. The test takes more time to lay out, and to sow, than a single test with fewer replicates, but the added accuracy compensates for the extra trouble.

SUMMARY OF YIELDS

Data on yields per acre of each variety which was grown in the different cereal variety zones are recorded in Table 2.

As the Ceres, Reliance and Garnet varieties were only sown in portions of many of the zones, this table is divided into sections, showing the Ceres, Reliance and Garnet varieties compared with Marquis, Thatcher and Reward sown in identical areas, and also showing a comparison between the Marquis, Thatcher and Reward varieties which were grown in all plots throughout each cereal variety zone.

A summary of the yields of the different varieties in each cereal variety zone is shown below. The comparisons are made between the varieties sown in identical plots in each zone.

Cereal Variety Zone 1

Severe drought conditions prevailed over most of the area covered by this cereal variety zone. Ceres is shown in only three tests in the zone. A comparison between Ceres and other varieties, grown in similar tests, shows that it has been outyielded by Thatcher by 1.7 bushels, a difference which is significant. Ceres, however, has outyielded Reward by a significant difference of 1.7 bushels. No significant difference appears between Ceres and Marquis. Reliance appears in 43 tests throughout this zone. When compared to other varieties sown in the same area it has equalled Thatcher in yielding ability, but has outyielded the Marquis and Reward varieties by 1.0 bushels and 2.4 bushels respectively. These differences are significant.

Marquis, Thatcher and Reward were grown in all tests, and a comparison shows that Thatcher has outyielded the Reward and Marquis varieties by 2.4 bushels and 1.1 bushels respectively. Both of these differences are significant. Marquis has also outyielded Reward by a significant difference of 1.3 bushels.

Cereal Variety Zone 2A

In the southern portion of this cereal variety zone, a long period of severe drought and extreme temperatures caused considerable havoc, and led to the abandonment of many of the Plots. In the northern area, however, conditions were better, and fair to good yields were recorded. Reliance is shown in only two tests in this zone. When compared with other varieties sown in the same area it has again equalled Thatcher in yielding ability, and has outyielded Reward and Marquis by 4.5 bushels and 3 bushels respectively, both of these differences being significant. Ceres was sown in 15 plots throughout the zone, and was outyielded by Thatcher by a significant difference of 2.4 bushels. No significant differences appear between the Marquis, Ceres and Reward varieties grown in similar plots. When comparing the three varieties grown throughout the entire zone it is found that Thatcher has outyielded Reward and Marquis by 3.7 bushels and 3.4 bushels respectively. These differences are both significant. No significant difference appears between Marquis and Reward.

Cereal Variety Zone 2B

Fair to good yields are shown in the southern districts of this zone, with yields of a lower nature in the central areas. In that region adjacent to the Alberta boundary, however, which is represented more or less by the area covered by Wheat Pool District 12, severe drought conditions caused considerable damage, and only low yields are recorded. Reliance, which appears in thirteen tests in the zone, was outyielded by Thatcher by 2.2 bushels. This difference is significant. Reliance has outyielded both Marquis and Reward by significant differences of 1.9 bushels and 1.4 bushels respectively. In that portion of the zone where Ceres was the fourth variety, Ceres outyielded both Marquis and Reward by 1.5 bushels and 2.8 bushels respectively. Both of these differences are significant. No significant difference appears between Ceres and Thatcher. Over the whole zone Thatcher has outyielded Reward and Marquis by 3.5 bushels and 2.7 bushels respectively. These differences are significant. No significant difference is shown between Marquis and Reward.

Cereal Variety Zone 2C

Lack of moisture and excessive heat resulted in almost complete failures in this area, and only yields covering two tests were available for analysis. Reward proved to be the highest yielding variety, with an average yield of 4.5 bushels, followed by Thatcher, with 4 bushels, Ceres with 3 bushels, and Marquis with 2.5 bushels. Reward has outyielded Marquis by 2.0 bushels, a difference that is significant. No differences of a significant nature appear between any of the other varieties.

Cereal Variety Zone 3A

With the exception of the southern portion of this zone, where extreme drought conditions prevailed, fair to good yields are shown throughout the major portion of the zone. Thatcher outyields all other varieties with an average yield of 22.7 bushels.

Ceres produced the next highest yield, with 21.2 bushels, followed by Reward with 19.4 bushels, and Marquis with 19.2 bushels. Thatcher has outyielded Marquis and Reward by 2.5 and 2.3 bushels respectively. Both of these differences are significant. Ceres has outyielded Marquis by 2.0 bushels, a difference that is also significant. No significant differences appear between Ceres and Thatcher, Ceres and Reward, or Marquis and Reward.

Cereal Variety Zone 3B

Good yields are reported throughout this area. Of the four varieties grown, Thatcher ranks first, with an average yield of 28.9 bushels per acre, followed by Ceres with 26.6 bushels, Marquis with 23.0 bushels, and Reward with 22.3 bushels. Thatcher and Ceres outyielded Marquis and Reward by differences that are significant. No significant differences are shown between Ceres and Thatcher, or Marquis and Reward.

Cereal Variety Zone 3C

Generally, throughout this entire zone, fair to good yields are shown. Garnet appears in five tests in the northern part of the soil zone, but it has been outyielded by all varieties. Thatcher has outyielded Garnet by 12.6 bushels, a difference that is highly significant. Garnet has also been outyielded by Marquis and Reward by 7.6 bushels and 6.0 bushels respectively. Both of these differences are significant. Ceres was the fourth variety grown in 17 plots in the southern portion of the zone, and has outyielded Reward and Marquis by significant differences of 7.0 bushels and 2.0 bushels respectively.

No significant difference appears between Thatcher and Ceres. Throughout all plots, Thatcher outyielded Reward and Marquis by significant differences of 7.6 bushels and 3.4 bushels respectively. Marquis shows a significant difference of 4.2 bushels over Reward.

Cereal Variety Zone 3D

With the exception of one plot, fair to good yields are also reported in this area. Thatcher led the field in yielding ability, with an average yield of 27.8 bushels, followed by Marquis with 24.6 bushels, Garnet with 23.4 bushels, and Reward with 20.8 bushels. Reward was outyielded by all varieties by differences that are significant. Thatcher outyielded Marquis and Garnet by 3.2 and 4.4 bushels respectively. Both of these differences are also significant. No significant difference is shown between Marquis and Garnet.

Cereal Variety Zone 3E

The central portion of this zone suffered severely by drought conditions, and in all other areas, with the exception of one or two plots, only poor to fair yields are recorded. Four yields of Ceres are available for analysis purposes in this zone. This variety has been outyielded by Thatcher by 1.8 bushels, a difference that is significant, but Ceres has outyielded Reward by a significant difference of 1.0 bushel. No significant difference appears between Ceres and Marquis. Garnet appears in 23 tests throughout the zone, but has been outyielded by Thatcher by 3.0 bushels. This difference is significant. Garnet has outyielded Reward by a significant difference of 1.4 bushels. No significant difference appears between Garnet and Marquis. A comparison of the three standard varieties shows that Thatcher has outyielded Reward by 4.2 bushels, a difference that is highly significant, and has outyielded Marquis by a significant difference of 3.1 bushels. Marquis has outyielded Reward by 1.1 bushels, a difference that is also significant.

Cereal Variety Zone 4A

Comparatively few plots were located in this area. Only one test with Ceres is shown in the zone. When compared with other varieties in the same plot, it was outyielded by Marquis by 5.0 bushels, and has outyielded Reward by 6.0 bushels. Ceres and Thatcher show equal yielding ability with 20 bushels each. In the two plots where Garnet was the fourth variety, it outyielded Marquis by 1.5 bushels, but was outyielded by Thatcher and Reward by 5.5 bushels and 1.5 bushels respectively. When comparing Marquis, Thatcher and Reward, which was grown in all these tests, Thatcher outyielded Marquis by 3.0 bushels, and Reward by 4.7 bushels. No significant differences appear between any of these varieties.

Cereal Variety Zone 4B

Drought conditions prevailed in the Western territory of this zone, but some good yields are shown in the Eastern regions. Garnet shows the highest yield, with an average of 16 bushels per acre. It is followed by Thatcher, with 14.7 bushels, Reward with 13 bushels, and Marquis with 12.7 bushels. While Garnet has outyielded Thatcher in this northern area by 1.3 bushels, the difference is not significant. Garnet has, however, outyielded Marquis by 3.3 bushels, and Reward by 3.0 bushels, both differences being significant. No significant differences are shown between Thatcher, Marquis and Reward.

TABLE 2—AVERAGE YIELDS IN BUSHELS PER ACRE BY CEREAL VARIETY ZONES

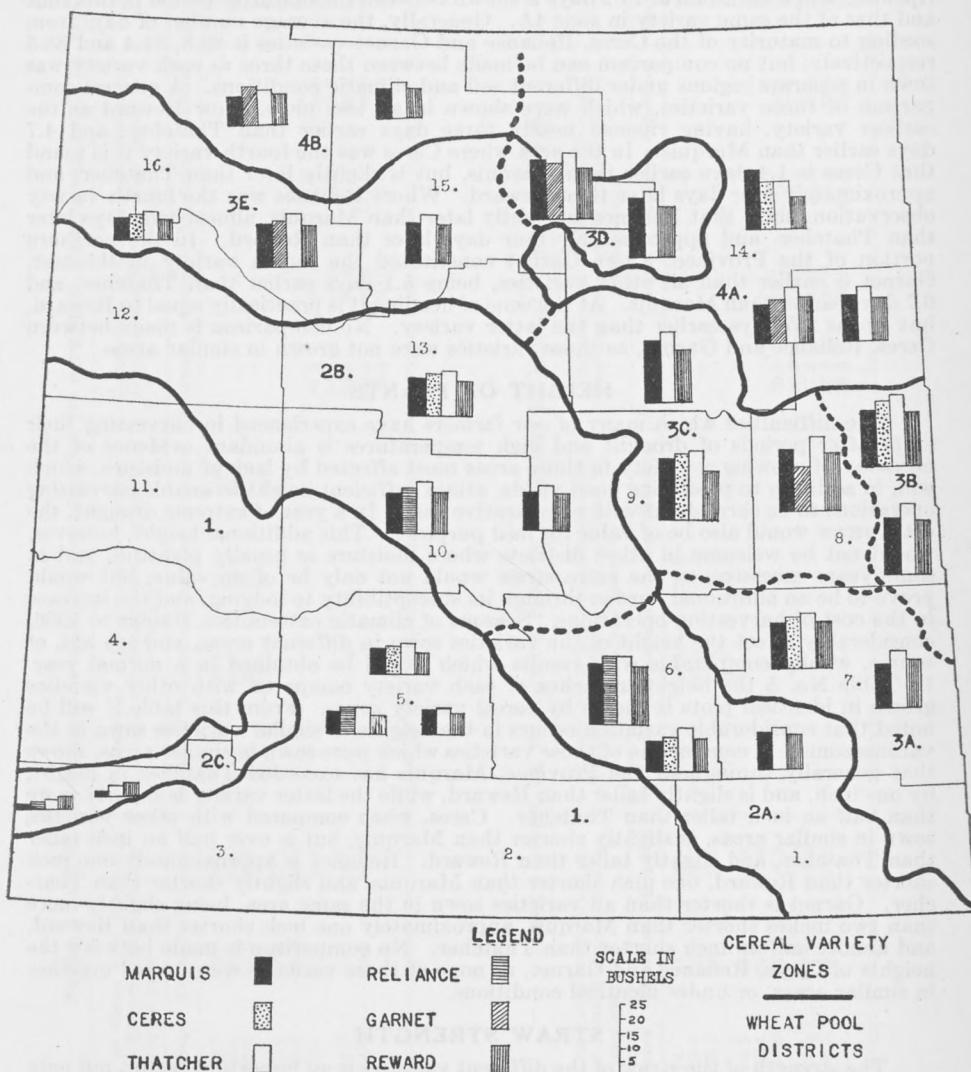
Cereal Variety Zone	Comparison of Ceres with Marquis, Thatcher and Reward when grown in similar plots.			Comparison of Reliance with Marquis, Thatcher and Reward when grown in similar plots.			Comparison of Garnet with Marquis, Thatcher and Reward when grown in similar plots.			Comparison of Marquis, Thatcher and Reward grown in all plots.			Lowest significant difference in bushels
	Marquis	Ceres	Thatcher	Reward	Marquis	Reliance	Thatcher	Reward	Marquis	Garnet	Thatcher	Reward	
1.....	11	11.3	13	9.6	10.2	11.2	8.8	.....	.....	.....	10.2	11.3	8.9
2A.....	14	14.9	17.3	13.7	25.5	28.5	24	.....	.....	.....	15.4	18.6	14.9
2B.....	15.8	17.3	17.9	14.5	17	18.9	21.1	17.5	.....	.....	16.2	18.9	15.5
2C.....	19.5	21.2	22.7	19.4	2.5	3.0	4.0	4.5	.....	.....	2.5	4	4.5
3A.....	23	26.6	28.9	22.3	.....	.....	.....	.....	.....	.....	19.2	22.7	19.4
3B.....	25	27	28	20	.....	.....	.....	.....	25	17.4	30	23.4	22.3
3C.....	3D.....	9.2	9.7	11.5	.....	.....	.....	.....	24.6	23.4	27.8	25	3.02
3E.....	25	20	20	14	.....	.....	.....	.....	18.2	18.4	21.4	24.6	2.00
4A.....	4B.....	.....	.....	.....	.....	.....	.....	.....	16	17.5	23	17	2.20
									12.7	14.7	13	12.7	14.7

TABLE 3—AVERAGE YIELDS—PERCENTAGE OF MARQUIS BY CEREAL VARIETY ZONES

Cereal Variety Zone	Comparison of Ceres, Thatcher and Reward to Marquis in Per Cent. when grown in similar plots.			Comparison of Reliance, Thatcher and Reward to Marquis in Per Cent. when grown in similar plots.			Comparison of Garnet, Thatcher and Reward to Marquis in Per Cent. when grown in similar plots.			Comparison of Thatcher and Reward to Marquis in Per Cent.			Marquis Thatcher Reward
	Marquis	Ceres	Thatcher	Reward	Marquis	Reliance	Thatcher	Reward	Marquis	Garnet	Thatcher	Reward	
1.....	100	103	118	87	100	110	110	86	.....	.....	.....	.....	100 111 121 87
2A.....	100	106	124	98	100	112	112	94	103	100	100	100	100 117 121 97
2B.....	100	109	113	92	100	111	124	103	100	100	100	100	100 117 121 96
2C.....	.....	100	110	118	100	100	120	100	180	.....	.....	100	100 116 120 180
3A.....	100	110	118	101	100	100	100	100	100	100	100	100	100 118 126 97
3B.....	100	116	126	97	100	100	100	100	100	100	100	100	100 116 126 101
3C.....	100	108	112	80	100	100	100	95	100	100	100	100	100 114 126 83
3D.....	.....	105	125	94	100	100	100	100	100	100	100	100	100 113 123 84
3E.....	100	80	80	56	100	100	100	100	100	100	100	100	100 118 126 93
4A.....	100	.....	.....	.....	100	100	100	100	100	100	100	100	100 116 126 91
4B.....	.....	.....	.....	.....	100	100	100	100	100	100	100	100	100 116 126 102

HISTOGRAMS SHOWING YIELD

The histograms shown below give a comparison of yields in bushels per acre of the different varieties grown in each cereal variety zone. The comparison is made between those varieties grown in similar plots. Thus, as Ceres, Reliance and Garnet, in a number of instances, were only sown in a portion of the cereal variety zone, each of these varieties is compared only with Marquis, Thatcher and Reward, grown in identical plots. Separate comparisons are made between the yields of the three latter varieties which were grown in all tests in each zone.



DAYS FROM SOWING TO RIPENING

The number of days required, from seeding to maturity, is an important feature in all wheat varieties. Frequent losses, through drought, rust and frost, fully demonstrate the necessity of "earliness" to escape either or all of these menacing agents, which have so often converted the most promising crops into dismal failures. Unfortunately, during an exceedingly dry and hot season, such as obtained in 1936 over large areas of the Province, the difference in maturity periods between the varieties

is not so marked as in a normal year, as the severe weather conditions have a tendency to ripen, or rather dry out, the different varieties at nearly the same time. In Table No. 4 is shown the average number of days taken by each variety, from seeding to maturity, in the different cereal variety zones. An average of all tests shows that the Marquis variety, which, in a normal year, requires generally from about 105 to 112 days to mature, has ripened in an average of 89.8 days. The severity of the weather conditions which prevailed in the drought stricken areas is clearly indicated by the extremely short maturity periods, particularly in cereal variety zone one, where, in the case of Marquis, only an average of 83.6 days elapsed from the time of seeding until ripening, and a variation of 14.2 days is shown between the maturity period in this zone and that of the same variety in zone 4A. Generally, the average number of days from seeding to maturity of the Ceres, Reliance and Garnet varieties is 89.8, 84.4 and 88.5 respectively, but no comparison can be made between these three as each variety was sown in separate regions under different soil and climatic conditions. A general comparison of those varieties, which were shown in all test plots, show Reward as the earliest variety, having ripened nearly three days earlier than Thatcher, and 4.7 days earlier than Marquis. In the area where Ceres was the fourth variety it is found that Ceres is 1.4 days earlier than Marquis, but is slightly later than Thatcher, and approximately four days later than Reward. Where Reliance was the fourth variety observations show that Reliance is slightly later than Marquis, almost two days later than Thatcher, and approximately four days later than Reward. In the northern portion of the Province, where Garnet constituted the fourth variety in the test, Garnet is earlier than all other varieties, being 5.1 days earlier than Thatcher, and 6.7 days earlier than Marquis. At the time of heading it is practically equal to Reward, but ripens 2.5 days earlier than the latter variety. No comparison is made between Ceres, Reliance and Garnet, as these varieties were not grown in similar areas.

HEIGHT OF PLANTS

The difficulties which many of our farmers have experienced in harvesting their crops after periods of drought and high temperatures is abundant evidence of the necessity of growing a variety in those areas most affected by lack of moisture, which will, in addition to producing good yields, attain sufficient height to enable harvesting operations to be carried out with comparative ease. In a year of extreme drought, the extra straw would also be of value for feed purposes. This additional height, however, would not be welcome in other districts where moisture is usually plentiful, and in some years excessive, as the extra straw would not only be of no value, but would prove to be an additional burden through its susceptibility to lodging, and the increase in the cost of harvesting operations. Seasons of climatic extremities, similar to 1936, considerably affect the height of the varieties sown in different areas, and are not, of course, wholly comparable with results which would be obtained in a normal year. In Table No. 5 the height in inches of each variety compared with other varieties grown in identical plots is shown by cereal variety zones. From this table it will be noted that considerable variation occurs in the heights of similar varieties sown in the various zones. A comparison of those varieties which were sown in similar areas, shows that generally throughout the Province, Marquis has exceeded Thatcher in height, by one inch, and is slightly taller than Reward, while the latter variety is slightly more than half an inch taller than Thatcher. Ceres, when compared with other varieties sown in similar areas, is slightly shorter than Marquis, but is over half an inch taller than Thatcher, and slightly taller than Reward. Reliance is approximately one inch shorter than Reward, one inch shorter than Marquis, and slightly shorter than Thatcher. Garnet is shorter than all varieties sown in the same area, being slightly more than two inches shorter than Marquis, approximately one inch shorter than Reward, and almost half an inch shorter than Thatcher. No comparison is made between the heights of Ceres, Reliance and Garnet, as none of these varieties were tested together in similar areas, or under identical conditions.

STRAW STRENGTH

The strength of the straw of the different varieties is an important factor, not only in the prevention of lodging during seasons when moisture is ample and growth is rank, but also in dry years, in combating damage by high winds and light hail storms. In reporting straw strengths, junior co-operators were requested to report on a basis of 10 to 0, recording the strength as ten if the plants were straight and erect. If the plants tended to lean slightly, or were slightly curved at the base, the straw strength would be shown as 9, the greater the lean, and the greater proportion of leaning plants, the lower the figure shown until, if the rows were flat upon the ground, they would receive 0 for straw strength. In Table No. 6 is shown the strength of straw of the varieties grown in identical plots in each cereal variety zone, based on the marking

TABLE 4—AVERAGE NUMBER OF DAYS FROM SEEDING TO RIPENING BY CEREAL VARIETY ZONES

Cereal Variety Zone	Comparison of Ceres with Marquis, Thatcher and Reward when grown in similar plots			Comparison of Reliance with Marquis, Thatcher and Reward when grown in similar plots			Comparison of Garnet with Marquis, Thatcher and Reward when grown in similar plots			Comparison of Marquis, Thatcher and Reward grown in all plots					
	Marquis	Ceres	Thatcher	Reward	Marquis	Reliance	Thatcher	Reward	Marquis	Garnet	Thatcher	Reward	Marquis	Thatcher	Reward
1	86.5	86.0	86.5	82.0	83.4	83.6	81.9	80.0	...	...	...	...	83.6	82.1	80.2
2A	88.7	87.1	86.5	82.3	88.0	88.0	82.0	82.0	...	...	...	...	88.6	86.2	82.4
2B	89.8	88.8	87.9	85.5	86.4	86.9	85.5	81.3	...	...	...	...	88.7	87.2	84.1
2C	...	...	...	...	85.0	85.5	81.0	80.0	...	...	...	...	85.0	81.0	80.0
3A	90.0	89.0	87.4	84.7	...	...	...	...	...	...	...	...	90.0	87.4	84.7
3B	93.3	90.5	90.4	86.4	...	...	...	...	97.2	90.1	95.8	94.0	93.3	90.4	86.4
3C	96.4	95.3	95.1	91.2	...	...	...	...	95.4	87.7	93.4	90.7	96.6	95.3	92.1
3D	...	...	...	...	...	...	...	...	93.6	87.5	91.5	89.2	95.4	93.1	91.4
3E	91.0	91.0	89.0	86.0	...	...	...	...	100.3	88.5	101.0	96.0	97.1	93.1	88.7
4A	90.0	84.0	85.0	83.0	...	...	...	...	93.5	90.0	92.0	91.5	97.8	97.0	92.8
4B	...	...	...	...	...	...	...	...	...	...	...	...	93.5	92.0	91.5

TABLE 5—AVERAGE HEIGHT OF PLANTS IN INCHES BY CEREAL VARIETY ZONES

Cereal Variety Zone	Comparison of Ceres with Marquis, Thatcher and Reward when grown in identical plots			Comparison of Reliance with Marquis, Thatcher and Reward when grown in identical plots			Comparison of Garnet with Marquis, Thatcher and Reward when grown in identical plots			Comparison of Marquis, Thatcher and Reward grown in all plots					
	Marquis	Ceres	Thatcher	Reward	Marquis	Reliance	Thatcher	Reward	Marquis	Garnet	Thatcher	Reward	Marquis	Thatcher	Reward
1	26	24	23	26	19.4	18.4	18.8	19.6	...	...	...	...	19.5	19.0	19.7
2A	23.6	23.6	23.2	23.7	33.5	32.0	31.5	32.0	...	...	...	...	24.6	24.1	24.6
2B	25.9	26.1	25.1	25.5	26.1	25.4	25.5	26.1	...	...	...	...	26.0	25.2	25.7
2C	...	...	...	...	19.2	18.7	18.5	21.0	...	...	...	...	19.2	18.5	21.0
3A	28.7	28.8	28.2	29.7	...	...	...	...	...	...	...	...	28.7	28.2	29.7
3B	32.3	32.4	31.1	31.6	31.6	31.1	32.5	32.0	...	...	...	...	32.3	31.1	31.6
3C	33.4	33.3	32.0	32.5	...	...	...	...	30.8	29.7	29.7	29.7	32.6	31.1	31.6
3D	...	...	...	...	...	...	...	...	29.2	26.9	27.1	29.2	26.9	27.1	27.1
3E	17.6	17.6	17.6	17.6	...	...	...	...	27.2	25.4	25.8	26.0	24.6	25.0	25.0
4A	31.0	28.0	29.0	29.0	...	...	...	...	33.3	27.0	30.3	31.3	32.8	29.8	30.8
4B	...	...	...	...	...	...	...	...	26.3	26.3	28.0	23.0	26.3	23.0	26.0

10 to 0, as mentioned above. A general comparison between those varieties, which were sown in all plots, shows Marquis and Thatcher with equal straw strengths. Both of these varieties are .5 stronger than Reward. Ceres, when compared with other varieties grown in similar areas, is slightly weaker in straw strength to Thatcher and Marquis, and .6 stronger than Reward. Reliance, when compared with other varieties grown in identical areas is slightly stronger than Thatcher and Marquis, and .5 stronger than Reward. Garnet shows the weakest straw strength, and is slightly weaker than the Reward grown in the same areas, and approximately .5 weaker than the Marquis and Thatcher varieties. No comparison is made between Ceres, Reliance and Garnet, as these varieties were not tested under equal conditions.

WEIGHT PER MEASURED BUSHEL

While bushel weight is only one factor in determining the commercial grades of wheat, it is, nevertheless, an important influence, especially in a year similar to 1936, when drought or some other cause has resulted in a super abundance of shrunken kernels. In Table No. 7 is shown the average bushel weight of each variety by cereal variety zones, together with differences from Marquis. From this table it will be observed that the severe weather conditions are reflected in the weights of all varieties grown in those plots located in areas where extreme drought conditions prevailed. Reward has exceeded all varieties in bushel weight, in all zones, with the exception of Zone 2C, where, although it outyielded other varieties, it has been exceeded in bushel weight by both Marquis and Reliance. A summary of weights per bushel in each cereal variety zone is given on page 19. In order that a proper comparison may be made in the bushel weights of the different varieties, where a variety has not been sown in all test plots in the zone, it has only been compared with those varieties which were sown in identical plots.

Cereal Variety Zone 1

In the three plots situated in this zone, where Ceres was the fourth variety, Ceres was outweighed by Reward by .9 lbs., a difference that is significant, but Ceres outweighed the Thatcher variety by 2.0 lbs., a difference that is also significant. No significant difference appears between Marquis and Ceres. In forty-two plots where Reliance was sown, Reward outweighed Reliance by 2.5 lbs., a difference that is highly significant. Marquis also outweighed Reliance by a significant difference of .8 lbs., but Reliance outweighed the Thatcher variety by a significant difference of 1.2 lbs. A comparison of the three standard varieties which were grown in all plots in the zone, shows that Reward outweighed Thatcher by 3.7 lbs., a difference that is highly significant. Reward also outweighed Marquis by a significant difference of 1.6 lbs. Marquis outweighed Thatcher by 2.1 lbs., a difference that is also significant.

Cereal Variety Zone 2A

Only two plots, with Reliance as the fourth variety, appear in this zone. Reliance was outweighed by the Reward variety by 1.3 lbs., a difference that is significant, but Reliance outweighed Marquis and Thatcher by .8 lbs. and 1.2 lbs. respectively. Both of these differences are also significant. In the fifteen plots in this cereal variety, where Ceres was grown, Reward outweighed the Ceres variety by a significant difference of 1.4 lbs., but Ceres outweighed Marquis and Thatcher by 1.6 lbs. and 1.2 lbs. respectively. These differences are also significant. Throughout the entire zone Reward outweighed Marquis and Thatcher by significant differences of 2.8 lbs. and 2.5 lbs. respectively. No significant difference appears between Marquis and Thatcher.

Cereal Variety Zone 2B

Reliance constituted the fourth variety in 13 plots in this zone. It was outweighed by Reward by a difference of 1.9 lbs., which is highly significant. Reliance outweighed Thatcher by 2.3 lbs. This difference is also highly significant. Reliance also outweighed Marquis by a significant difference of 1.1 lbs. In the 25 plots, where Ceres was the fourth variety, Reward outweighed Ceres by 1.7 lbs., a difference which is highly significant, but Ceres outweighed Thatcher by a highly significant difference of 1.9 lbs. Ceres also outweighed Marquis by .8 lbs., a difference which is significant. A comparison of those varieties sown in all plots in the zone shows that Reward outweighed Marquis and Thatcher by highly significant differences of 2.6 lbs. and 3.7 lbs. respectively. Marquis outweighed Thatcher by 1.1 lbs., a difference that is significant.

Cereal Variety Zone 2C

Reliance was the fourth variety throughout this zone, and outweighed all other varieties, with an average weight of 54.7 lbs. per measured bushel. The next highest weighing variety is Marquis, with 54.5 lbs., Reward with 53.2 lbs., and Thatcher with 50.9 lbs. No significant difference appears between any of these varieties.

TABLE 6—COMPARISON OF STRAW STRENGTHS BASIS 0-10 BY CEREAL VARIETY ZONES

Cereal Variety Zone	Comparison of Ceres with Marquis, Thatcher and Reward when grown in similar plots			Comparison of Reliance with Marquis, Thatcher and Reward when grown in similar plots			Comparison of Garnet with Marquis, Thatcher and Reward when grown in similar plots			Comparison of Marquis, Thatcher and Reward grown in all plots		
	Marquis	Ceres	Thatcher	Reward	Marquis	Reliance	Thatcher	Reward	Marquis	Garnet	Thatcher	Reward
1.	9.9	9.5	9.2	9.4	9.2	9.3	9.1	8.5	....	....	....	....
2A.	9.2	9.1	9.2	8.5	9.2	9.6	8.9	8.9	....	....	....	....
2B.	8.7	8.6	8.8	8.1	9.4	9.5	9.4	9.5	....	....	....	....
2C.	....	....	....	....	9.4	9.7	9.6	9.8	....	....	....	....
3A.	9.4	9.5	9.5	9.6	....	....	....	....	....	....	....	....
3B.	9.8	9.5	9.7	8.9	....	....	....	....	....	....	....	....
3C.	9.5	9.1	9.5	8.6	....	....	....	....	....	....	....	....
3D.	....	....	....	....	....	....	....	....	....	....	....	....
3E.	9.5	9.4	8.8	8.7	....	....	....	....	....	....	....	....
4A.	10.0	9.8	10.0	9.5	....	....	....	....	....	....	....	....
4B.	....	....	....	....	....	....	....	....	....	....	....	....

TABLE 7—WEIGHT PER MEASURED BUSHEL IN LBS. BY CEREAL VARIETY ZONES

Cereal Variety Zone	Comparison of Ceres with Marquis, Thatcher and Reward when grown in similar plots.			Comparison of Reliance with Marquis, Thatcher and Reward when grown in similar plots.			Comparison of Garnet with Marquis, Thatcher and Reward when grown in similar plots.			Comparison of Marquis, Thatcher and Reward grown in all plots.		
	Marquis	Ceres	Thatcher	Reward	Marquis	Reliance	Thatcher	Reward	Marquis	Garnet	Thatcher	Reward
1.	61.5	61.4	59.4	62.3	59.2	58.4	57.2	60.9	....	....	....	....
2A.	60.6	62.2	61.0	63.6	62.5	63.3	62.1	64.6	....	....	....	....
2B.	59.9	60.7	58.8	62.4	59.3	60.4	58.1	62.3	....	....	....	....
2C.	....	....	....	....	54.5	54.7	50.9	53.2	....	....	....	....
3A.	59.8	61.0	59.7	62.8	....	....	....	....	....	....	....	....
3B.	61.1	62.6	62.8	64.0	....	....	....	....	....	....	....	....
3C.	61.7	62.9	62.6	64.4	....	....	....	....	61.7	63.1	64.1	64.4
3D.	....	....	....	....	....	....	....	....	60.9	60.0	63.3	63.3
3E.	59.8	57.6	61.8	60.2	....	....	....	....	60.3	59.5	58.9	61.9
4A.	63.5	63.8	66.2	....	....	....	....	....	58.5	62.5	63.1	62.9
4B.	....	....	....	....	....	....	....	....	61.9	61.7	62.4	62.4

Cereal Variety Zone 3A

Ceres was sown in all plots in the zone. Reward, with an average weight of 62.8 lbs., again outweighs all other varieties, followed by Ceres with 61.0 lbs., Marquis with 59.8 lbs., and Thatcher with 59.7 lbs. Reward outweighed Marquis and Thatcher by 3.0 lbs., and 3.1 lbs. respectively. Both of these differences are highly significant. Reward also outweighed Ceres by a significant difference of 1.8 lbs. Ceres outweighed both Marquis and Thatcher by 1.2 lbs., and 1.3 lbs. respectively. Both of these differences are also significant. No significant difference is shown between Marquis and Thatcher.

Cereal Variety Zone 3B

Ceres again constituted the fourth variety throughout this zone. Reward outweighed all other varieties with an average weight of 64 lbs. The next highest weighing variety is Thatcher with 62.8 lbs., followed by Ceres with 62.6 lbs., and Marquis with 61.1 lbs. Reward has outweighed all other varieties by differences that are significant. Ceres and Thatcher have outweighed Marquis by 1.5 lbs. and 1.7 lbs. respectively. Both of these differences are also significant. No significant difference appears between Ceres and Thatcher.

Cereal Variety Zone 3C

Garnet was sown in five plots in this zone, and has been outweighed by all other varieties. Reward and Thatcher have both outweighed Garnet by highly significant differences of 3.1 lbs. and 2.1 lbs respectively. Marquis has also outweighed Garnet by .7 lbs., a difference which is significant. Ceres was grown in seventeen tests, and was outweighed by Reward by a significant difference of 1.5 lbs., but Ceres outweighed Marquis by 1.2 lbs., a difference that is also significant. No significant difference appears between Ceres and Thatcher. Throughout the entire zone Reward has outweighed both Marquis and Thatcher by highly significant differences of 2.7 lbs. and 1.7 lbs. respectively. Thatcher has outweighed Marquis by 1.0 lbs., a difference that is significant.

Cereal Variety Zone 3D

Garnet was sown in all plots in this zone. Reward again shows the highest bushel weight with 63.3 lbs. Marquis has the next highest weight, with 61 lbs., followed by Garnet with 60.9 lbs., and Thatcher with 60.0 lbs. Reward has outweighed Thatcher, Garnet and Marquis by 3.3 lbs., 2.4 lbs., and 2.3 lbs. respectively. All of these differences are significant, but no difference of a significant nature appears between any of the other varieties.

Cereal Variety Zone 3E

Ceres constituted the fourth variety in three plots in this zone. It was outweighed by Reward by a significant difference of 2.0 lbs., but Ceres outweighed both Thatcher and Marquis by 2.2 lbs., and .6 lbs. respectively. Both of these differences are also significant. Garnet was sown in 25 plots, and was outweighed by Reward and Marquis by significant differences of 2.4 lbs. and .8 lbs. respectively, but Garnet outweighed Thatcher by .6 lbs., a difference which is also significant. A comparison of those varieties sown in all plots shows that Reward outweighed Thatcher by a highly significant difference of 3.1 lbs., and outweighed Marquis by a difference of 1.7 lbs., which is significant. Marquis outweighed Thatcher by 1.4 lbs. This difference is also significant.

Cereal Variety Zone 4A

Reward exceeds the other varieties in this cereal variety zone with an average weight of 64.1 lbs. Only one replicate of Ceres appears in this area, and this variety shows a bushel weight of 63.5 lbs. Thatcher shows an average weight of 62.9 lbs. Marquis weighs an average of 60.2 lbs., and Garnet shows an average weight of 58.5 lbs. Marquis is outweighed by all other varieties except Garnet which shows a difference of 1.7 lbs. per bushel less than Marquis.

Cereal Variety Zone 4B

Garnet constituted the fourth variety in this zone. Reward again exceeds all other varieties with an average bushel weight of 62.4 lbs., followed by Marquis and Garnet with 61.9 lbs. each, and Thatcher with 61.7 lbs. No significant differences appear between any of these varieties.

COMMERCIAL GRADES

The commercial grade placed on any wheat variety is, of course, of considerable economic importance. In Table No. 8 is shown a summary of the percentage of each grade placed on all varieties in Cereal Variety Zones. From this table it will be observed that generally all varieties graded well, with the exception of those which were grown in areas most affected by drought conditions, where high percentages of badly shrunken kernels resulted in losses in grades. This is particularly evident in Zone 2C, where none of the varieties graded above 2 Northern.

TABLE 8—PERCENTAGE OF COMMERCIAL GRADES

Cereal Variety Zone		% 1 Hd.	% 1 Nor.	% 2 Nor.	% 3 Nor.	% 4 Nor.	% No. 5	% No. 6	% 2 Tf.
1.....	Marquis.....	10.6	29.8	38.3	10.6	8.6	2.1	...	...
	Ceres.....	...	33.3	33.3	33.3	...	...	...	...
	Reliance.....	25.0	36.4	25.0	11.3	2.3	...	...	...
	Thatcher.....	6.5	15.2	34.8	21.7	17.4	4.4	...	...
	Reward.....	20.0	33.3	28.9	11.1	4.4	2.3	...	...
2A.....	Marquis.....	17.6	47.1	17.6	5.9	11.8	...	...	...
	Ceres.....	26.7	46.7	13.3	6.7	6.6	...	...	...
	Reliance.....	...	100.0	...	...	...	...	...	...
	Thatcher.....	5.9	64.7	11.8	5.9	11.7	...	...	...
	Reward.....	41.2	35.3	17.6	5.9	...	...	...	...
2B.....	Marquis.....	35.6	28.9	24.4	11.1	...	...	...	...
	Ceres.....	31.2	46.9	21.9	...	...	...	...	...
	Reliance.....	30.8	30.8	38.4	...	...	...	...	...
	Thatcher.....	11.1	40.0	33.3	13.3	2.3	...	...	...
	Reward.....	37.8	37.8	24.4	...	...	...	...	...
2C.....	Marquis.....	...	...	...	100.0	...	...	...	...
	Reliance.....	...	...	100.0	...	...	...	...	...
	Thatcher.....	...	...	...	...	...	50.0	50.0	50.0
	Reward.....	...	...	...	...	50.0	50.0	50.0	50.0
3A.....	Marquis.....	21.4	28.6	21.4	14.3	14.3	...	...	...
	Ceres.....	14.3	35.7	28.6	21.4	...	...	...	...
	Thatcher.....	14.3	28.6	35.8	7.1	7.1	7.1	...	...
	Reward.....	28.6	28.6	28.6	7.1	7.1	...	...	...
3B.....	Marquis.....	37.5	25.0	25.0	...	...	...	...	12.5
	Ceres.....	50.0	25.0	12.5	...	...	...	...	12.5
	Thatcher.....	37.5	37.5	12.5	...	...	...	...	12.5
	Reward.....	50.0	37.5	...	...	...	...	...	12.5
3C.....	Marquis.....	56.5	26.1	13.1	4.3	...	...	...	...
	Ceres.....	52.9	47.1	...	...	...	...	...	...
	Garnet.....	50.1 (1 C.W.)	33.3 (2 C.W.)	...	16.7	...	...	...	...
	Thatcher.....	56.5	34.8	8.7	...	...	...	...	...
	Reward.....	56.5	21.8	21.7	...	...	...	...	...
3D.....	Marquis.....	63.6	...	18.2	9.1	9.1	...	...	...
	Garnet.....	81.8 (2 C.W.)	18.2 (2 C.W.)	...	...	...	...	...	...
	Thatcher.....	45.4	27.3	9.1	9.1	9.1	...	...	...
	Reward.....	72.7	27.3	...	...	...	...	...	...
3E.....	Marquis.....	45.2	35.5	16.1	3.2	...	...	...	...
	Ceres.....	40.0	40.0	20.0	...	...	...	...	...
	Garnet.....	64.0 (1 C.W.)	28.0 (2 C.W.)	...	4.0	4.0	...	...	...
	Thatcher.....	12.9	54.8	22.6	6.5	3.2	...	...	...
	Reward.....	50.0	33.3	16.7	...	...	...	...	...
4A.....	Marquis.....	...	33.3	66.7	...	...	...	...	...
	Ceres.....	...	...	100.0	...	...	...	...	...
	Garnet.....	100.0 (1 C.W.)	...	...	...	...	...	...	...
	Thatcher.....	33.3	66.7	...	...	...	...	...	...
	Reward.....	100.0	...	...	...	...	...	...	...
4B.....	Marquis.....	75.0	25.0	...	...	...	...	...	...
	Garnet.....	100.0 (1 C.W.)	...	...	...	...	...	...	...
	Thatcher.....	100.0	...	...	...	...	...	...	...
	Reward.....	75.0	...	25.0	...	...	...	...	...

SUMMARY OF RESULTS

Below is given the general characteristics of Marquis wheat and the characteristics of the other varieties, with a comparison to Marquis grown in similar test plots as shown by the results obtained in the test. It must, however, again be pointed out that these results cover one year only, and the reactions of any variety during a season of drought and high temperatures, such as prevailed in 1936, are not wholly comparable with those which might be obtained in a normal year.

Marquis.—This variety was sown in all test plots, and yielded from 2.5 bushels per acre in Cereal Variety Zone 2C to 25 bushels per acre in Zone 3C. Over the entire test an average yield of 16.5 bushels per acre is shown. The number of days required from sowing to ripening averaged from 83.6 days in Zone 1, to 97.8 days in Zone 4A, with an average of 89.8 days over the whole test. Marquis generally equalled or exceeded all varieties in straw strength, with the exception of Reliance, although in some individual soil zones the other varieties, except Garnet, showed stronger straw strength. Marquis averaged 25.6 inches in height, being taller than any of the other varieties. Throughout the whole test this standard variety averaged 60.1 lbs. per bushel. It is more susceptible to rust infection than any of the other varieties.

Ceres.—Ceres was the fourth variety grown in test plots located in Wheat Pool Districts 1, 6, 7, 8, 9, 12, and 13. These districts were located in Cereal Variety Zones 3A and 3B, and a portion of zones 1, 2A, 2B, 3C, 3E and 4A. Ceres shows an average yield of 19.7 bushels per acre. Compared to Marquis, grown in similar plots, it has outyielded the standard variety by 1.6 bushels per acre, and has ripened 1.4 days earlier. The straw is slightly weaker and slightly shorter than Marquis. The average weight per bushel is 61.7 lbs., which compared to Marquis grown in similar areas, shows an increase in weight over the standard variety of 1.1 lbs. per bushel. Ceres is less susceptible to rust infection than Marquis or Reward, but much more susceptible than the Thatcher variety.

Reliance.—Reliance constituted the fourth variety grown in Wheat Pool Districts 2, 3, 4, 5, 10 and 11. These districts are located in Cereal Variety Zones 2C, and a portion of Zones 1, 2A and 2B. Throughout this territory Reliance yielded an average of 13.2 bushels per acre, outyielding the Marquis variety grown in similar plots, by 1.3 bushels per acre. Compared to Marquis, grown in the same area, it was slightly later, slightly stronger in straw, and one inch shorter than the standard variety. Reliance shows an average weight per measured bushel of 60.4 lbs., which is 1.2 lbs. more than the Marquis variety grown in similar test plots. It is less susceptible to stem rust than Marquis, and practically equal to Reward in the amount of infection recorded, but shows a much larger percentage of infection than Thatcher.

Garnet.—Garnet represented the fourth variety in Wheat Pool Districts 14, 15 and 16. These districts are located in the northern area of the Province in Cereal Variety Zones 3D and 4B, and portions of Zones 3C, 3E and 4A. Over this region Garnet produced an average yield of 19 bushels per acre, which was .7 bushels per acre less than Marquis, grown in the same territory. Compared to Marquis, it was 6.7 days earlier, somewhat weaker in straw, and slightly more than 2 inches shorter in height. In bushel weight, Garnet is slightly lower than Marquis, averaging 60.1 lbs. per bushel, .5 lbs. less than the standard variety grown in similar areas. It is less susceptible to stem rust than Marquis, but shows more infection than Reward, and considerably more than Thatcher.

Thatcher.—Thatcher was grown in all plots, and generally outyielded all other varieties. Over the whole test an average yield of 19.2 bushels is shown. Compared to the Marquis variety, which was also sown in all test plots, Thatcher has exceeded the standard variety in yield per acre by 2.7 bushels. It is generally nearly two days earlier, equal in straw strength, and one inch shorter than Marquis. The average weight of Thatcher, over the entire test, is 59.8 lbs. per measured bushel, being .3 lbs. per bushel less than the Marquis variety. Thatcher is practically immune to stem rust, showing only a small amount of infection in all areas, and much less than any of the other varieties.

Reward.—Reward was also grown in all testing plots, and over the entire test shows an average yield of 13.5 bushels per acre, yielding 3 bushels per acre less than Marquis. Compared to the Marquis variety it is 4.7 days earlier, weaker in straw, and somewhat shorter in height. The average weight per measured bushel of Reward is shown as 62.4 lbs., which is 2.3 lbs. more than Marquis, and higher than any of the other varieties. Reward is slightly more susceptible to stem rust than Ceres, about equal in susceptibility to Reliance, and shows less infection than Marquis and Garnet. It is, however, much more susceptible to infection than Thatcher.

Individual Summarized Results of All Tests—In Wheat Pool Districts

WHEAT POOL DISTRICT 1

Cereal variety	Sub-zone	Dist.	Sub-dist.	Test designa-	Plant height	Days seed-	*	Pounds per measured bushel	Commercial grades	Protein content in percentage
zone				nation	per acre	inches	ing to ripe	Straw strength		

BURTON EDWARD TAYLOR, GAINSBOROUGH

3A	1	1	A	Marquis.....	16	31	89	10	55.5	4	19.3
"	"	"	"	Ceres.....	16	32	87	10	57	3	18.3
"	"	"	"	Thatcher.....	19	32	85	10	53.5	5	19.9
"	"	"	"	Reward.....	17	32	83	10	56.6	4	19.1

Significant Difference .92 bus.

JOHN WELLINGTON PEET, ALIDA

3A	1	2	A	Marquis.....	5	20	...	9	58	3	17.9
"	"	"	"	Ceres.....	5	20	...	9.3	59	3	17.6
"	"	"	"	Thatcher.....	5	18	...	9	57	3	18.4
"	"	"	"	Reward.....	7	22	...	8.5	61	2	18.0

Significant Difference 1.3 bus.

RUSSEL YATES, STORTHOAKS

3A	1	2	B	Marquis.....	14	26	84	9.8	55	4	18.7
"	"	"	"	Ceres.....	16	26	84	9	57.5	3	19.5
"	"	"	"	Thatcher.....	16	26	84	9.8	55	4	19.7
"	"	"	"	Reward.....	17	29	80	8	59	3	19.1

Significant Difference .87 bus.

RAY W. BARBER, AUBURTON

2A	1	3	B	Marquis.....	6	18	86	10	61.5	1	17.5
"	"	"	"	Ceres.....	4	15	86	9	62	1	18.0
"	"	"	"	Thatcher.....	6	16	84	9	61	1	18.1
"	"	"	"	Reward.....	5	16	82	9.8	63	1 Hd.	19.2

Significant Difference 2.1 bus.

KEITH WILLIAM LEGGE, WILLMAR

2A	1	4	A	Marquis.....	9	21	91	10	60	2	17.6
"	"	"	"	Ceres.....	8	19	89	10	60.5	1	17.4
"	"	"	"	Thatcher.....	9	20	89	10	57.5	3	18.2
"	"	"	"	Reward.....	8	20	84	10	62	1	18.8

Significant Difference 1.2 bus.

PAUL GERVAIS, HITCHCOCK

2A	1	5	B	Marquis.....	...	14	78	4.3	...	..	18.9
"	"	"	"	Ceres.....	...	17	78	6.5	...	..	17.8
"	"	"	"	Thatcher.....	...	17	79	5.3	...	..	19.6
"	"	"	"	Reward.....	...	20	76	5	...	..	19.7

Significant Difference—(Severe damage by drought, gophers and grasshoppers. Yields discarded).

ARTHUR DORNIAN, OUTRAM

1	1	6	B	Marquis.....	9	...	90	10	61	2	17.7
"	"	"	"	Ceres.....	8	...	89	10	61	2	16.8
"	"	"	"	Thatcher.....	9	...	90	9.3	60	3	18.3
"	"	"	"	Reward.....	7	...	83	10	61	4	18.1

Significant Difference 3.6 bus.

WAYNE EDWARD McALPINE, OUNGRE

1	1	7	A	Marquis.....	7	...	...	10	59	2	16.8
"	"	"	"	Ceres.....	6	...	...	10	58.5	3	16.5
"	"	"	"	Thatcher.....	6	...	...	9.8	57	3	18.0
"	"	"	"	Reward.....	5	...	...	9.8	59.5	3	18.1

Significant Difference 6.4 bus.

DOUGLAS RUSSEL PULFER, WEYBURN

2A	1	8	A	Marquis.....	18	25	86	10	61.5	1	16.7
"	"	"	"	Ceres.....	17	23	82	10	61	1	16.2
"	"	"	"	Thatcher.....	18	22	80	10	58	2	17.8
"	"	"	"	Reward.....	17	24	79	10	63	1 Hd.	17.5

Significant Difference .69 bus.

KENNETH GRANT GRAY, STOUGHTON

2A	1	9	B	Marquis.....	7	16	86	10	59	4	18.9
"	"	"	"	Ceres.....	7	15	83	10	60	3	18.1
"	"	"	"	Thatcher.....	9	16	83	10	58	4	18.7
"	"	"	"	Reward.....	8	18	80	10	61	3	19.2

Significant Difference 1.9 bus.

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

2A	1	1	B	Russel Warren Douglas, Carnduff	2A	1	7	B	Colin C. Thackeray, Goodwater
2A	1	3	A	William G. Deyell, Alameda	2A	1	8	B	Neil Victor Fenwick, Griffin
2A	1	4	B	Metro Katruski, Bienfait	2A	1	9	A	Clarence A. Hookenson, Kisbey
2A	1	5	A	Roger Carlton, Benson	3A	1	10	A	Lucien Gislin Garnier, Frys
2A	1	6	A	Albert Miller Manley, Midale	3A	1	10	B	Kenneth Alastair Cameron, Carlyle

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

*Straw strength taken on basis of 0 to 10, with 10 indicating very strong.

Individual Summarized Results of All Tests—Continued

WHEAT POOL DISTRICT 2

Cereal variety zone	Dist.	Sub-dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commer-cial grades	Protein content in percentage
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MATT JOHN BRILZ, LAKE ALMA

1	2	1	A	Marquis.....	...	11	81	10
..	Reliance.....	...	12	81	9.5
..	Thatcher.....	...	14	76	10
..	..	..	..	Reward.....	...	18	73	10	...	..	...

Significant Difference—(no samples received).

JOSEPH MAZENC, DALEVIEW

1	2	1	B	Marquis.....	...	18	77	9	...	..	16.8
..	..	..	..	Reliance.....	...	16	77	9.8	...	..	17.2
..	..	..	..	Thatcher.....	...	16	75	9.5	...	..	18.0
..	..	..	..	Reward.....	...	19	73	9	...	..	18.4

Significant Difference—(severe cutworm damage, yields discarded).

ANDROS WIOME, MINTON

1	2	2	A	Marquis.....	16	...	...	...	62	1	17.8
..	..	..	..	Reliance.....	14	...	...	...	62	2	17.2
..	..	..	..	Thatcher.....	14	...	...	...	61	2	18.2
..	..	..	..	Reward.....	14'	...	...	...	62	2	18.8

Significant Difference 3.3 bus.

ROBERT T. McCUTCHEON, CEYLON

1	2	2	B	Marquis.....	8	...	...	...	6.5	61	1	16.6
..	..	..	..	Reliance.....	9	...	...	...	6.8	63	1	16.4
..	..	..	..	Thatcher.....	3	...	...	...	6.0	59	2	18.0
..	..	..	..	Reward.....	1	...	...	...	6.3	†	*	18.1

Significant Difference 3.6 bus.

CHARLES ALEX. DUNCAN, CORONACH

1	2	3	A	Marquis.....	4	15	82	10	58	2	17.6
..	..	..	..	Reliance.....	5	14	84	9.8	59	2	17.3
..	..	..	..	Thatcher.....	5	15	82	9.8	57	3	18.3
..	..	..	..	Reward.....	4	15	82	10	60	2	18.8

Significant Difference 1.4 bus.

HURBERT ANTHONY WINTER, CORONACH

1	2	3	B	Marquis.....	11	...	...	...	61.5	1	16.7
..	..	..	..	Reliance.....	12	...	...	...	62	1	16.2
..	..	..	..	Thatcher.....	11	...	...	...	59	2	17.5
..	..	..	..	Reward.....	9	...	...	...	63	1	17.6

Significant Difference 1.1 bus.

MURRAY ANGUS McCUAIG, FIFE LAKE

1	2	4	B	Marquis.....	...	...	84	...	†	*	17.9
..	..	..	..	Reliance.....	...	...	83	...	†	*	17.1
..	..	..	..	Thatcher.....	...	...	76	...	†	*	18.3
..	..	..	..	Reward.....	...	...	71	...	†	*	18.2

Significant Difference—(samples incomplete).

KENNETH HUBERT BARKER, KILLDEER

1	2	5	B	Marquis.....	7	20	78	10	59	2	18.5
..	..	..	..	Reliance.....	8	20	78	10	62	1	18.5
..	..	..	..	Thatcher.....	9	23	79	10	58	2	19.2
..	..	..	..	Reward.....	5	24	78	10	61	2	19.3

Significant Difference 2.3 bus.

ALBERT NELSON, FIR MOUNTAIN

1	2	6	A	Marquis.....	12	19	83	10	58	2	18.4
..	..	..	..	Reliance.....	13	17	82	10	59	2	18.1
..	..	..	..	Thatcher.....	12	19	79	10	57.5	3	18.9
..	..	..	..	Reward.....	12	20	77	10	62	2	18.8

Significant Difference .83 bus.

RUSSELL MELVIN REISNER, LIMERICK

1	2	7	A	Marquis.....	6	16	78	9	58	3	17.7
..	..	..	..	Reliance.....	9	16	78	10	60	2	17.7
..	..	..	..	Thatcher.....	8	16	73	10	57.5	3	18.6
..	..	..	..	Reward.....	4	18	71	10	61	2	18.3

Significant Difference 1.2 bus.

WALTER J. MYNETT, WOOD MOUNTAIN

1	2	7	B	Marquis.....	4	15	77	8	53	5	19.3
..	..	..	..	Reliance.....	3	15	78	9	55.5	4	20.3
..	..	..	..	Thatcher.....	2	16	72	8	†	*	19.4
..	..	..	..	Reward.....	6	19	70	8	54	5	21.2

Significant Difference 2.3 bus.

† = Insufficient to weigh.

* = Insufficient to grade.

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Dist.	Sub-dist.	Test design-nation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
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HAROLD JAMES CLIFFORD BROWN, READLYN

1	2	8	A	Marquis.....	11	22	...	10	64	1 Hd.	17.0
..	Reliance.....	11	21	...	9	65	1 Hd.	15.8
..	..	..	..	Thatcher.....	10	20	...	9	63	1 Hd.	18.0
..	..	..	..	Reward.....	7	20	...	8.3	65	1 Hd.	17.8

Significant Difference .79 bus.

HENRY MERVIN PRICE, READLYN

1	2	8	B	Marquis.....	15	22	...	6.8	61	1	15.7
..	..	..	..	Reliance.....	17	22	85	8.3	63	1 Hd.	16.0
..	..	..	..	Thatcher.....	16	22	...	8.3	61	1	17.9
..	..	..	..	Reward.....	13	22	85	6.0	64	1 Hd.	18.2

Significant Difference .61 bus.

JOHN GEORGE BRANDT, WHEATSTONE

1	2	9	A	Marquis.....	9	...	...	...	59	2	18.5
..	..	..	..	Reliance.....	9	...	...	...	61	1	18.4
..	..	..	..	Thatcher.....	9	...	...	...	57	3	19.5
..	..	..	..	Reward.....	9	...	...	...	62	1	18.5

Significant Difference 1.6 bus.

ALLEN LEROY MacDONALD, BENGOUGH

1	2	9	B	Marquis.....	10	20	75	9	59	2	17.7
..	..	..	..	Reliance.....	11	19	75	9	61	1	17.5
..	..	..	..	Thatcher.....	11	20	75	8.8	58.5	2	18.5
..	..	..	..	Reward.....	10	20	71	8.5	63	1	18.2

Significant Difference 1.0 bus.

WILLIAM ALAN CLEWS, PANGMAN

1	2	10	A	Marquis.....	5	13	72	9.5	58	2	19.7
..	..	..	..	Reliance.....	6	12	68	9	60	1	18.9
..	..	..	..	Thatcher.....	6	13	69	9.3	57	3	19.8
..	..	..	..	Reward.....	5	14	66	8.3	61	1	19.3

Significant Difference 1.8 bus.

LESLIE STEWART SPILSBURY, AMULET

1	2	10	B	Marquis.....	17	26	91	10	62	1	16.4
..	..	..	..	Reliance.....	19	23	91	9.5	63	1	16.4
..	..	..	..	Thatcher.....	18	23	85	9.5	61	1	17.6
..	..	..	..	Reward.....	14	24	85	9.8	64	1	18.2

Significant Difference .80 bus.

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

1 2 4 A Robert Edwin Gosselin, Willowbunch 1 2 5 A Jack Wilson, Lonesome Butte
1 2 6 B Joseph Burnlee Harding, LaFleche

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

WHEAT POOL DISTRICT 3

Cereal variety zone	Dist.	Sub-dist.	Test design-nation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
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DONALD HAMILTON McTAGGART, FERLAND

1	3	1	A	Marquis.....	9	15	82	10	57	3	19.2
..	Reliance.....	10	14	81	10	61	1	18.5
..	..	..	..	Thatcher.....	9	15	82	10	56	4	19.8
..	..	..	..	Reward.....	9	15	82	10	62	1	19.5

Significant Difference 1.5 bus.

DONALD ELIAS ODELL, CANUCK

1	3	3	A	Marquis.....	...	9	81	8.3	...	..	...
..	..	..	..	Reliance.....	...	9	81	7.8	...	..	...
..	..	..	..	Thatcher.....	...	9	81	7.0	...	..	...
..	..	..	..	Reward.....	...	9	81	6.5	...	..	...

Significant Difference—(severe drought damage, no sample received).

BILL STORK, KLINTONEL

2C	3	6	A	Marquis.....	...	29	90	10	...	..	13.6
..	..	..	..	Reliance.....	...	25	90	10	...	..	13.9
..	..	..	..	Thatcher.....	...	24	87	10	...	..	14.3
..	..	..	..	Reward.....	...	29	87	10	...	..	15.6

Significant Difference—(samples incomplete).

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Dist.	Sub-dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commercial grades	Protein content in percentage
DONALD ALEXANDER MEINERT, INSTOW											
2C	3	8	A	Marquis.....	2	11	...	9.5	†	*	20.1
..	..	..	..	Reliance.....	1	10	...	9.1	†	*	19.8
..	..	..	..	Thatcher.....	3	11	...	10	51	6	20.5
..	..	..	..	Reward.....	3	14	...	9.9	51	6	21.3

Significant Difference 1.4 bus.

ALBERT JOHN THOMPSON, ADMIRAL											
1	3	9	A	Marquis.....	...	14	83	10	57.5	3	20.2
..	..	..	..	Reliance.....	...	12	80	9.8	57	3	19.7
..	..	..	..	Thatcher.....	...	14	79	9.8	56	4	20.5
..	..	..	..	Reward.....	...	16	77	9.8	...	...	...

Significant Difference—(samples incomplete).

HAROLD FREDERICK GEO. BURTLE, ANEROID											
1	3	10	B	Marquis.....	1	14	...	...	†	*	19.2
..	..	..	..	Reliance.....	2	13	...	...	†	*	19.0
..	..	..	..	Thatcher.....	1	14	...	...	†	*	19.4
..	..	..	..	Reward.....	1	16	...	...	†	*	19.4

Significant Difference 2.6 bus.

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

1 3 1 B	Hugh Hamilton Munn, Mankota	2C 3 6 B	Calvin Paul Bentz, Ravenscrag
1 3 2 A	Alvin Holbird, Masefield	1 3 7 A	Conrade Keturakis, Shaunaevon
1 3 2 B	Lewis Milton Hill, Wallard	1 3 7 B	Wilbert Henry Lewis, Eastend
1 3 3 B	Miss Elsie Bertram, Climax	2C 3 8 B	Clarence Nelson, Instow
1 3 4 A	Gilman Arthur Indbjø, Frontier	1 3 9 B	Keith Ivan Selanders, Beaver Valley
1 3 4 B	Alfred Hyam, Claydon	1 3 10 A	Wesley Robert McKeith, Hazenmore
1 3 5 A	Edgar Arthur Morrison, Robsart		
1 3 5 B	Wilson Arthur Trumper, Govanlock		

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

WHEAT POOL DISTRICT 4

Cereal variety zone	Dist.	Sub-dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commercial grades	Protein content in percentage
ROBERT TIMOTHY HECKER, PIAPOT											
1	4	1	B	Marquis.....	4	16	78	9.5	55	4	18.7
..	..	..	..	Reliance.....	3	14	80	8	57.5	3	17.5
..	..	..	..	Thatcher.....	4	16	78	9.5	52	5	19.8
..	..	..	..	Reward.....	3	16	75	9	55	4	19.6

Significant Difference 2.5 bus.

EDWARD WHITE, MAPLE CREEK											
1	4	2	A	Marquis.....	14	20	85	10	61	2	14.1
..	..	..	..	Reliance.....	17	18	81	10	63	2	13.3
..	..	..	..	Thatcher.....	14	18	87	9.8	61	2	14.1
..	..	..	..	Reward.....	9	17	81	9.5	63	2	15.8

Significant Difference 1.7 bus.

LESLIE WILBUR TUTTLE, BEVERLEY											
2C	4	3	A	Marquis.....	3	13	80	8.3	58	3	19.8
..	..	..	..	Reliance.....	5	16	81	9.8	59	2	19.7
..	..	..	..	Thatcher.....	5	15	75	8.3	53	5	20.3
..	..	..	..	Reward.....	6	15	73	9.3	56	4	20.4

Significant Difference 2.7 bus.

OWEN ROGER MALCHOW, CANTUAR											
1	4	3	B	Marquis.....	...	17	79	...	59	2	18.4
..	..	..	..	Reliance.....	...	16	80	...	60	2	18.3
..	..	..	..	Thatcher.....	...	17	79	...	58	2	18.8
..	..	..	..	Reward.....	...	20	77	...	†	*	19.2

Significant Difference—(sample discarded)—Severe Drought and Hail Damage.

HOWARD KENNETH GUMMESON, CABRI											
1	4	5	A	Marquis.....	15	22	...	10	63	1 Hd.	17.1
..	..	..	..	Reliance.....	18	21	...	10	63	1 Hd.	16.0
..	..	..	..	Thatcher.....	17	22	...	9.8	61	1	17.6
..	..	..	..	Reward.....	12	23	...	8.3	62	1	17.7

Significant Difference 1.2 bus.

† = Insufficient to weigh.

* = Insufficient to grade.

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Dist.	Sub- dist.	Test designa- nation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
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VICTOR JULIUS EBEL, LEADER

1	4	8	B	Marquis.....	4	13	...	8.5	59.5	2	18.2
..	Reliance.....	6	13	...	8.5	61	1	17.8
..	..	..	..	Thatcher.....	6	13	...	8.5	57	3	19.1
..	..	..	..	Reward.....	5	13	...	8.3	59	2	18.8

Significant Difference 1.8 bus.

CHARLIE PETER STENHOUSE, PORTREEVE

1	4	9	A	Marquis.....	28	24	...	10	65	2	14.4
..	..	..	..	Reliance.....	29	25	...	10	65	1	13.7
..	..	..	..	Thatcher.....	30	23	...	9.8	64	1 Hd.	15.2
..	..	..	..	Reward.....	22	23	...	8.8	64	1 Hd.	16.7

Significant Difference 1.2 bus.

ROBERT HAROLD COLEMAN, ABBEY

1	4	10	B	Marquis.....	7	20	...	8.8	56	4	19.0
..	..	..	..	Reliance.....	3	18	...	10	57	3	18.6
..	..	..	..	Thatcher.....	7	19	...	9.8	53.5	5	19.2
..	..	..	..	Reward.....	6	22	...	8.3	57	3	19.2

Significant Difference 5.1 bus.

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

2C	4	1	A	Harvey Thomas Mellor, Garden Head	1	4	6	B	Harold J. Hanson, Maple Creek		
1	4	2	B	Peter Hawrylak, Maple Creek	1	4	7	A	Albert Herald Patric Preboy, Fox Valley		
1	4	4	A	William Mitchell Rudolph, Gull Lake	1	4	7	B	Franklin Xavier Lannen, Richmound		
1	4	4	B	John Jason Rebman, Verlo	1	4	8	A	David Bauer, Burstall		
1	4	5	B	Walter George Bowditch, Success	1	4	9	B	Charles Ernest Howes, Sceptre		
1	4	6	A	Charles Duncan Ahlberg, Golden Prairie	1	4	10	A	Raymond Patterson Dewar, Hazlet		

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

WHEAT POOL DISTRICT 5

Cereal variety zone	Dist.	Sub- dist.	Test designa- nation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
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RICHARD ALEXANDER JOLLY, MOSSBANK

1	5	1	A	Marquis.....	13	25	88	10	57	3	18.6
..	Reliance.....	13	23	88	10	58	2	18.3
..	..	..	..	Thatcher.....	14	25	84	10	55	4	19.4
..	..	..	..	Reward.....	9	26	84	7.3	59	2	18.6

Significant Difference 1.1 bus.

CHARLES IVAR TOLLEFSON, ETTINGTON

1	5	1	B	Marquis.....	11	24	82	8	56	4	18.0
..	..	..	..	Reliance.....	11	22	82	9	57	3	17.6
..	..	..	..	Thatcher.....	13	23	82	7.4	55	4	18.7
..	..	..	..	Reward.....	8	24	80	6.6	59	3	17.7

Significant Difference 1.4 bus.

ALBERT WILLIAM LAZENBY, ST. BOSWELLS

1	5	2	A	Marquis.....	12	...	...	9	57	3	16.3
..	..	..	..	Reliance.....	14	...	...	9	58	3	16.0
..	..	..	..	Thatcher.....	14	...	...	8.5	55	4	16.6
..	..	..	..	Reward.....	10	...	...	8.8	59	3	16.7

Significant Difference 1.8 bus.

EUSTACE HEDLEY DUNN, BURNHAM

1	5	4	B	Marquis.....	6	17	81	10	60	2	19.5
..	..	..	..	Reliance.....	6	17	83	10	60	2	19.9
..	..	..	..	Thatcher.....	8	17	74	10	56	4	20.0
..	..	..	..	Reward.....	10	20	74	10	59	3	20.5

Significant Difference 7.2 bus.

NELSON ROGER BRANDER, BATEMAN

1	5	5	B	Marquis.....	...	19	77	...	52	5	17.1
..	..	..	..	Reliance.....	16	83	...	57	4	16.9
..	..	..	..	Thatcher.....	18	81	...	52.5	5	17.9
..	..	..	..	Reward.....	19	75	...	57	4	18.2

Significant Difference—(samples incomplete).

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Dist.	Sub-dist.	Test designation	Varieties	Yield per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
JOHN ROSS ANDERSON, COURVAL											
1	5	6	A	Marquis.....	26	32	94	10	61	1	15.9
..	..	..	..	Reliance.....	24	31	93	9	61.5	1	15.8
..	..	..	..	Thatcher.....	24	30	93	10	59	2	17.2
..	..	..	..	Reward.....	22	30	93	8.5	63	1 Hd.	17.7
Significant Difference .84 bus.											
LAURENCE JOHN HICKS, EASTLEIGH											
1	5	6	B	Marquis.....	12	27	...	9	61	1	16.5
..	..	..	..	Reliance.....	15	25	86	9	63	1 Hd.	15.9
..	..	..	..	Thatcher.....	14	26	86	9	61	1	17.3
..	..	..	..	Reward.....	11	26	86	8	64	1 Hd.	17.4
Significant Difference 2.7 bus.											
EDGAR LORNE WILSON, GRAYBURN											
2A	5	7	A	Marquis.....	21	30	...	9	63	1 Hd.	14.3
..	..	..	..	Reliance.....	23	28	...	9.8	64	1 Hd.	13.7
..	..	..	..	Thatcher.....	22	28	...	9.3	61.5	1	15.4
..	..	..	..	Reward.....	17	28	...	8.8	64	1 Hd.	15.3
Significant Difference .69 bus.											
CLARKE ALVA THOMPSON, BOHARM											
1	5	7	B	Marquis.....	...	28	...	8.3	...	..	...
..	..	..	..	Reliance.....	...	28	...	9	...	..	...
..	..	..	..	Thatcher.....	...	27	...	9	...	..	...
..	..	..	..	Reward.....	...	27	...	8	...	..	...
Significant Difference—(no sample received).											
JOHN DOUGLAS BECK, MAWER											
1	5	8	A	Marquis.....	...	31	84	5.8	57.5	3	14.4
..	..	..	..	Reliance.....	...	31	82	10	59.5	2	14.7
..	..	..	..	Thatcher.....	...	29	82	9.8	58	3	15.7
..	..	..	..	Reward.....	...	31	82	6.8	63	1	16.6
Significant Difference—(samples incomplete) (severe bird damage).											
DARL EDWIN HICKS, MARQUIS											
2A	5	8	B	Marquis.....	30	37	88	9.5	63	1	14.3
..	..	..	..	Reliance.....	34	36	88	9.5	63	1	14.1
..	..	..	..	Thatcher.....	35	35	82	10	62	1	15.8
..	..	..	..	Reward.....	31	36	82	9	65	2	16.6
Significant Difference .68 bus.											
ALBERT SMITH, DROXFORD											
1	5	9	A	Marquis.....	14	24	86	10	61.5	1	17.8
..	..	..	..	Reliance.....	15	20	86	10	62	1	17.3
..	..	..	..	Thatcher.....	15	22	86	10	59	2	17.9
..	..	..	..	Reward.....	13	22	77	8.5	63	1	17.5
Significant Difference .93 bus.											
BOWYER BRADFORD, JR., LAWSON											
1	5	9	B	Marquis.....	11	24	87	10	60	4	16.5
..	..	..	..	Reliance.....	15	23	89	10	63	3	15.9
..	..	..	..	Thatcher.....	13	23	86	9.8	60	4	17.0
..	..	..	..	Reward.....	9	24	83	9.3	60	4	17.5
Significant Difference 2.5 bus.											
DAVID STEWART GALL, CALDERBANK											
1	5	10	B	Marquis.....	...	33	...	10	63.5	1 Hd.	14.8
..	..	..	..	Reliance.....	...	30	...	10	65	1 Hd.	14.9
..	..	..	..	Thatcher.....	...	30	...	10	62.5	1	16.0
..	..	..	..	Reward.....	...	28	...	10	64	1 Hd.	17.0
Significant Difference—(yields discarded, severe bird damage).											

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

1	5	2	B	Raymond	George	Peltier,	Gravel-	1	5	4	A	Cyril J. James, Waldeck
				bourg				1	5	5	A	Harry Andrew Poulsen, Scottsburg
2C	5	3	A	George	Andrew	Bannerman,	Neville	1	5	10	A	Harold Lloyd Roberts, Morse
1	5	3	B	Austin	Elden	McKee,	Neville					

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

Individual Summarized Results of All Tests—Continued

WHEAT POOL DISTRICT 6

Cereal variety zone	Dist.	Sub- dist.	Test designa- nation	Varieties	Yield per acre	Plant height in inches	Days seed- ing to ripe	Straw strength	Pounds measured bushel	Commer- cial grades	Protein content in percentage
ROY VANSTONE, LANG											
2A	6	1	A	Marquis.....	...	21	...	9.3	62.5	1	15.2
..	..	..	..	Ceres.....	...	20	...	9.3	62.5	1	16.2
..	..	..	..	Thatcher.....	...	19	...	9	62	1	16.4
..	..	..	..	Reward.....	...	20	...	8	....	..	...
Significant Difference—(samples incomplete).											
CLIFFORD WOODROW KENNEDY, KRONAU											
2A	6	2	A	Marquis.....	...	22	...	10	57	3	14.5
..	..	..	..	Ceres.....	...	21	...	10	59	2	14.4
..	..	..	..	Thatcher.....	...	18	...	10	59	2	15.6
..	..	..	..	Reward.....	...	21	...	10	†	*	16.2
Significant Difference—(samples incomplete).											
GARTH VERNON BOESCH, RICETON											
2A	6	2	B	Marquis.....	17	27	...	10	62	1	14.1
..	..	..	..	Ceres.....	19	28	...	10	63	2	14.4
..	..	..	..	Thatcher.....	22	26	...	10	62	1	15.9
..	..	..	..	Reward.....	16	26	...	10	63	1	16.9
Significant Difference 1.2 bus.											
JAMES CAMERON BRADLEY, MILESTONE											
2A	6	3	B	Marquis.....	...	100	9	...	...	..	...
..	..	..	..	Ceres.....	...	100	9	...	...	..	...
..	..	..	..	Thatcher.....	...	100	8.8	...	...	..	...
..	..	..	..	Reward.....	...	97	7.8	...	...	..	...
Significant Difference—(samples incomplete).											
GEORGE PETER MACHMER, SPRING VALLEY											
1	6	4	B	Marquis.....	17	26	83	9.8	63	2	16.3
..	..	..	..	Ceres.....	20	26	83	9.5	63	1	16.2
..	..	..	..	Thatcher.....	24	25	83	9.8	61	2	16.8
..	..	..	..	Reward.....	17	26	81	8.5	63	2	17.2
Significant Difference 1.8 bus.											
CLIFFORD JAMES HOWES, PASQUA											
2A	6	5	B	Marquis.....	23	35	...	10	63	1 Hd.	13.3
..	..	..	..	Ceres.....	28	35	...	10	64	1 Hd.	14.4
..	..	..	..	Thatcher.....	30	33	...	10	62	1	14.6
..	..	..	..	Reward.....	25	33	...	8.8	63	1	15.8
Significant Difference .85 bus.											
CLIFFORD BURDETTE ELDER, DRINKWATER											
2A	6	6	A	Marquis.....	17	27	86	7.8	59	2	15.1
..	..	..	..	Ceres.....	19	28	86	7.5	63	1 Hd.	14.7
..	..	..	..	Thatcher.....	22	26	85	8.3	61	1	15.8
..	..	..	..	Reward.....	13	26	82	5.5	64	1 Hd.	16.1
Significant Difference 1.8 bus.											
WILLIAM T. BOTKIN, ROULEAU											
2A	6	6	B	Marquis.....	...	84	9	57	3	15.4	
..	..	..	..	Ceres.....	...	84	9.5	60	1	14.7	
..	..	..	..	Thatcher.....	...	89	9.5	61.5	1	16.0	
..	..	..	..	Reward.....	...	81	6.8	63	1	16.1	
Significant Difference—(Considerable mouse damage, yields discarded).											
EDDY GALENZOSKI, EDENWOLD											
2A	6	7	A	Marquis.....	16	...	...	7.8	59.5	4	13.9
..	..	..	..	Ceres.....	19	...	92	7.8	62	4	13.8
..	..	..	..	Thatcher.....	22	...	94	8	63	4	14.9
..	..	..	..	Reward.....	17	...	...	8	66	2	15.9
Significant Difference 3 bus.											
ROY CHARLES CLARKE, R.R. No. 2, REGINA											
2A	6	7	B	Marquis.....	24	31	...	8.8	61	1	14.4
..	..	..	..	Ceres.....	30	32	83	7	62.5	1 Hd.	14.8
..	..	..	..	Thatcher.....	35	30	79	9	61.5	1	15.7
..	..	..	..	Reward.....	27	30	79	8.5	64	1 Hd.	16.1
Significant Difference .40 bus.											
ERNEST BROOKS DONNELLY, INDIAN HEAD											
2A	6	8	A	Marquis.....	12	...	...	...	57	3	15.9
..	..	..	..	Ceres.....	17	...	...	...	61	1 Hd.	16.4
..	..	..	..	Thatcher.....	19	...	...	...	61	1	17.0
..	..	..	..	Reward.....	19	...	...	...	64	1 Hd.	17.8
Significant Difference 2.0 bus.											

† = Insufficient to weigh.

* = Insufficient to grade.

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Dist.	Sub-dist.	Test design-nation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	*Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
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ELWOOD ROY ALDOUS, LORLIE

3A	6	9	A	Marquis.....	23	26	...	7.8	65	1 Hd.	15.4
..	Ceres.....	21	28	...	8.8	64	1 Hd.	16.9
..	..	..	..	Thatcher.....	26	27	...	8.8	63.3	1 Hd.	16.2
..	..	..	..	Reward.....	17	28	...	7.8	65	1 Hd.	17.8

Significant Difference 1.4 bus.

JOHN ROBERT STILLBORN, LORLIE

3A	6	9	B	Marquis.....	33	33	93	7.3	61	1	14.6
..	..	..	..	Ceres.....	40	33	87	9	64	1	15.1
..	..	..	..	Thatcher.....	46	32	88	9	64	1	15.6
..	..	..	..	Reward.....	31	33	86	8.3	65	2	17.1

Significant Difference 1.0 bus.

W. A. ROBERT McLEAN, LUMSDEN

2B	6	10	A	Marquis.....	13	...	...	...	59	2	16.7
..	..	..	..	Ceres.....	12	...	...	...	60	1	16.2
..	..	..	..	Thatcher.....	14	...	...	...	58	2	17.8
..	..	..	..	Reward.....	9	...	...	...	63	1	17.1

Significant Difference 1.3 bus.

KENNETH ALBERT BROWN, CRAVEN

2B	6	10	B	Marquis.....	20	26	...	9	61	1	14.6
..	..	..	..	Ceres.....	23	25	...	9	61	1	15.0
..	..	..	..	Thatcher.....	23	24	...	8.8	59.5	2	15.5
..	..	..	..	Reward.....	16	25	...	8	63	1	17.5

Significant Difference 1.6 bus.

DONALD A. BUCHANAN, FRANCIS

2A	6	2	C	Marquis.....	13	33	...	9	61	1	14.1
..	..	..	..	Ceres.....	14	33	...	9	63	1	15.1
..	..	..	..	Thatcher.....	17	30	...	9	62	1	16.8
..	..	..	..	Reward.....	12	30	...	9	63.5	1	17.6

Significant Difference 1.1 bus.

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

2A	6	1	B	Miles Duffas, Colfax	1	6	5	A	Lloyd Oscar Lind, Baildon
2A	6	3	A	John Alexander Nolan, Rouleau	2A	6	8	B	Leslie A. Donaldson, Avonhurst
1	6	4	A	Glen Miller Campbell, Avonlea					

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

WHEAT POOL DISTRICT 7

Cereal variety zone	Dist.	Sub-dist.	Test design-nation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
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HUGH DUNCAN AYERS, FAIRLIGHT

3A	7	1	A	Marquis.....	...	24	92	10	61	3	17.2
..	Ceres.....	...	22	96	10	61.5	1	17.1
..	..	..	..	Thatcher.....	...	21	89	10	61	3	17.9
..	..	..	..	Reward.....	...	21	87	10	62	1	18.3

Significant Difference—(yields discarded, extensive bird damage).

WM. FREDERICK REUBEN HARRIS, RYERSON

3A	7	1	B	Marquis.....	16	25	96	10	59.5	2	16.9
..	..	..	..	Ceres.....	14	26	93	10	61	1	17.3
..	..	..	..	Thatcher.....	16	26	91	10	59	2	18.6
..	..	..	..	Reward.....	15	26	90	10	63	1	18.2

Significant Difference 2.0 bus.

LLOYD ALFRED GRIFFIN, MOOSOMIN

3A	7	2	B	Marquis.....	10	27	...	10	60	1	17.4
..	..	..	..	Ceres.....	14	25	...	10	58	2	16.9
..	..	..	..	Thatcher.....	12	27	...	10	61	1	18.0
..	..	..	..	Reward.....	11	29	81	10	63	1 Hd.	18.2

Significant Difference 3.1 bus.

WALDEMAR KIRICHENKO, LANGBANK

3A	7	3	A	Marquis.....	...	29	91	8	...	..	...
..	..	..	..	Ceres.....	...	28	93	8	...	..	...
..	..	..	..	Thatcher.....	...	28	90	7	...	..	...
..	..	..	..	Reward.....	...	24	84	5	...	..	...

Significant Difference—(No samples received).

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Sub- dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
HENRY JOHN WILSON, WAWOTA										
3A	7	3	B Marquis.....	20	29	...	10	61	1	15.9
..	..	..	.. Ceres.....	23	29	...	10	63	1	15.8
..	..	..	.. Thatcher.....	20	29	...	10	60.5	2	17.9
..	..	..	.. Reward.....	18	31	87	10	64	1	18.9
Significant Difference 2.8 bus.										
JAS. ALEX. ARNOLD KEITH, INCHKEITH										
2A	7	4	A Marquis.....	8	22	...	10	62	1	16.0
..	..	..	.. Ceres.....	9	22	...	10	64	1	17.5
..	..	..	.. Thatcher.....	7	22	...	10	62	1	17.9
..	..	..	.. Reward.....	6	23	...	10	65	1	18.6
Significant Difference 1.6 bus.										
MISS ETHEL MAY BROWN, WINDTHORST										
2A	7	4	B Marquis.....	...	16	98	8.3	62	3	17.9
..	..	..	.. Ceres.....	...	18	91	8	62	2	17.6
..	..	..	.. Thatcher.....	...	19	91	9	62	3	18.4
..	..	..	.. Reward.....	...	22	86	6	63	4	18.1
Significant Difference—(yields discarded, extensive rabbit damage).										
DONALD HAMILTON McKAY, CORNING										
2A	7	5	A Marquis.....	11	20	88	10	62	2	17.4
..	..	..	.. Ceres.....	10	21	86	8.8	62	2	18.1
..	..	..	.. Thatcher.....	13	21	86	9.3	61	2	17.6
..	..	..	.. Reward.....	9	22	82	8.3	63	2	18.2
Significant Difference .94 bus.										
ANTOINE PERRON, MONTMARTRE										
2A	7	6	A Marquis.....	15	22	91	10	63	1	16.5
..	..	..	.. Ceres.....	11	21	91	10	63	1	17.1
..	..	..	.. Thatcher.....	17	22	89	10	63	1	17.7
..	..	..	.. Reward.....	12	22	82	10	63	1	18.3
Significant Difference 3.4 bus.										
WM. JAMES PERDUE, PEEBLES										
2A	7	6	B Marquis.....	14	23	90	10	64	1 Hd.	15.9
..	..	..	.. Ceres.....	12	22	89	9.8	64	1 Hd.	17.5
..	..	..	.. Thatcher.....	14	22	83	9.8	63	1	16.6
..	..	..	.. Reward.....	13	23	82	8.5	65	1 Hd.	18.4
Significant Difference .65 bus.										
ROBERT BURNETT TURNBULL, MOFFAT										
3A	7	7	A Marquis.....	19	28	87	10	61	1	16.5
..	..	..	.. Ceres.....	19	28	86	10	63	1	17.5
..	..	..	.. Thatcher.....	23	27	86	10	63	1	17.6
..	..	..	.. Reward.....	21	29	83	10	64	1	17.7
Significant Difference 1.0 bus.										
GORDON VICTOR ROY STRINGER, GRENFELL										
3A	7	7	B Marquis.....	22	33	92	10	60	2	16.9
..	..	..	.. Ceres.....	22	33	89	10	61	2	17.0
..	..	..	.. Thatcher.....	26	33	90	10	60	2	17.7
..	..	..	.. Reward.....	22	34	87	10	63	2	18.1
Significant Difference 1.1 bus.										
MURRAY STEWART FERGUSON, ROCANVILLE										
3A	7	8	A Marquis.....	25	37	90	10	59	2	17.6
..	..	..	.. Ceres.....	29	37	90	10	59.5	2	17.2
..	..	..	.. Thatcher.....	34	36	88	10	58.5	2	18.1
..	..	..	.. Reward.....	31	38	84	8	61	2	18.1
Significant Difference 1.4 bus.										
ALLAN GORDON STRANLUND, PERCIVAL										
3A	7	8	B Marquis.....	30	38	90	9	63	1 Hd.	15.0
..	..	..	.. Ceres.....	30	38	90	9	63	1	15.6
..	..	..	.. Thatcher.....	29	36	90	9.8	63	1	16.5
..	..	..	.. Reward.....	29	39	87	8.5	65	1 Hd.	16.8
Significant Difference 1.4 bus.										
HERBERT HERMAN HILDEBRANDT, LANGENBURG										
3B	7	9	A Marquis.....	17	33	...	10	63.5	1 Hd.	15.9
..	..	..	.. Ceres.....	19	33	...	10	63	1 Hd.	16.0
..	..	..	.. Thatcher.....	21	34	...	10	61	1	17.3
..	..	..	.. Reward.....	18	32	...	10	65	1 Hd.	17.3
Significant Difference 1.9 bus.										

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Dist.	Sub-dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commer-cial grades	Protein content in per-cent-age
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LLOYD W. D. KIRK, MARCHWELL

3B	7	9	B	Marquis.....	20	32	84	10	60	2	16.9
..	Ceres.....	21	33	81	10	61.5	2	17.2
..	..	..	..	Thatcher.....	25	31	81	9	61	2	18.0
..	..	..	..	Reward.....	22	31	79	7	63	1	18.6

Significant Difference 1.2 bus.

ARNOLD V. NIEBERGALL, NEUDORF

3A	7	10	A	Marquis.....	20	...	...	...	63.5	1 Hd.	14.2
..	..	..	..	Ceres.....	30	...	...	...	65	1 Hd.	14.5
..	..	..	..	Thatcher.....	28	...	...	...	64	1 Hd.	15.3
..	..	..	..	Reward.....	22	...	...	...	65.5	1 Hd.	16.2

Significant Difference 2.0 bus.

ROBERT MATSON, DUBUC

3A	7	10	B	Marquis.....	16	25	87	10	59	3	17.9
..	..	..	..	Ceres.....	18	27	85	10	60	2	18.0
..	..	..	..	Thatcher.....	18	25	85	10	59	2	18.6
..	..	..	..	Reward.....	14	30	82	8	61.5	1	18.5

Significant Difference 1.4 bus.

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

3A 7 2 A Ivan George Burden, Moosomin 2A 7 5 B Miss Ruth E. MacNaughton, Creelman

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

WHEAT POOL DISTRICT 8

Cereal variety zone	Dist.	Sub-dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commer-cial grades	Protein content in per-cent-age
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JON ROBERT EGILSSON, CALDER

3B	8	1	A	Marquis.....	...	28	94	8.8	61	1	14.4
..	Ceres.....	...	26	94	8.8	63	1 Hd.	15.8
..	..	..	..	Thatcher.....	...	26	94	9.3	63	1 Hd.	16.6
..	..	..	..	Reward.....	...	...	...	...	...	..	...

Significant Difference—(samples incomplete).

JOE BAHREY, WROXTON

3B	8	1	B	Marquis.....	38	39	88	10	61.5	1	15.9
..	..	..	..	Ceres.....	44	38	88	10	64	1 Hd.	15.7
..	..	..	..	Thatcher.....	51	37	88	10	63	1	17.0
..	..	..	..	Reward.....	33	36	84	9.5	63.5	1	17.9

Significant Difference .35 bus.

DONALD ROSS MACKENZIE, ROKEBY

3C	8	2	A	Marquis.....	...	103	9	63	1	15.8
..	..	..	..	Ceres.....	...	103	9	64	2	16.8
..	..	..	..	Thatcher.....	...	103	9	63	2	17.0
..	..	..	..	Reward.....	...	...	...	...	..	...

Significant Difference—(samples incomplete).

MISS JUNE SHARP, ROKEBY

3C	8	2	B	Marquis.....	19	37	...	10	65	1 Hd.	15.4
..	..	..	..	Ceres.....	16	36	...	9	65	1 Hd.	15.7
..	..	..	..	Thatcher.....	18	34	...	9.8	65	1 Hd.	16.6
..	..	..	..	Reward.....	11	35	...	8.8	66	1 Hd.	17.4

Significant Difference 2.6 bus.

JACK MATTHEWS, DUFF

3C	8	3	A	Marquis.....	13	...	...	10	62	1	16.0
..	..	..	..	Ceres.....	13	...	...	10	61	1	16.8
..	..	..	..	Thatcher.....	13	...	...	10	60	2	17.1
..	..	..	..	Reward.....	9	...	...	10	61.5	2	17.9

Significant Difference 3.7 bus.

JOE GULASH, Jr., McKIM

3C	8	3	B	Marquis.....	27	33	95	8	61.5	1	14.7
..	..	..	..	Ceres.....	28	33	92	7.3	63.5	1 Hd.	15.8
..	..	..	..	Thatcher.....	28	32	94	9.3	63	1 Hd.	16.4
..	..	..	..	Reward.....	26	32	90	7	65	1 Hd.	16.7

Significant Difference 1 bus.

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Dist.	Sub. dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in per- centage
DAVID GEORGE BIRRELL, FITZMAURICE											
3C	8	4	A	Marquis.....	25	31	97	8	65	1 Hd.	14.8
..	..	..	..	Ceres.....	24	32	95	5.8	64.5	1 Hd.	16.2
..	..	..	..	Thatcher.....	21	31	96	8	64.5	1 Hd.	16.6
..	..	..	..	Reward.....	16	28	90	6	66	1	17.3
Significant Difference 2.1 bus.											
DAN MATTHEW DRAPER, YORKTON											
3C	8	4	B	Marquis.....	19	...	...	10	59.5	2	15.4
..	..	..	..	Ceres.....	26	...	...	10	62	1	16.0
..	..	..	..	Thatcher.....	24	...	...	10	62	1	16.6
..	..	..	..	Reward.....	14	...	...	10	63	1	18.7
Significant Difference 3.4 bus.											
MICHAEL OSTAFIE, MIKADO											
3B	8	5	A	Marquis.....	15	...	...	10	61.5	2 Tf.	14.9
..	..	..	..	Ceres.....	19	...	...	10	60	2 Tf.	16.3
..	..	..	..	Thatcher.....	17	...	...	10	60	2 Tf.	15.9
..	..	..	..	Reward.....	13	...	...	10	61	2 Tf.	18.2
Significant Difference 2 bus.											
IAN COWAN MACLEAN, KAMSACK											
3B	8	5	B	Marquis.....	20	35	98	10	61	1	14.0
..	..	..	..	Ceres.....	25	34	96	9	63	1 Hd.	14.9
..	..	..	..	Thatcher.....	27	32	98	10	64	1 Hd.	15.9
..	..	..	..	Reward.....	18	31	94	7.8	64	1 Hd.	15.9
Significant Difference .73 bus.											
MISS MARGUERITE AGNES McDONALD, TADMORE											
3C	8	6	A	Marquis.....	19	27	97	9	59	2	13.6
..	..	..	..	Ceres.....	23	27	98	9	63	1	13.9
..	..	..	..	Thatcher.....	30	26	96	9	63	1	14.1
..	..	..	..	Reward.....	23	28	97	8.3	64	1	16.2
Significant Difference 1.3 bus.											
WILLIAM WITZKO, CANORA											
3C	8	6	B	Marquis.....	29	...	...	...	61	1	16.1
..	..	..	..	Ceres.....	36	...	...	...	62	1	15.7
..	..	..	..	Thatcher.....	36	...	...	...	62	1	16.0
..	..	..	..	Reward.....	29	...	...	...	64	1 Hd.	17.4
Significant Difference .51 bus.											
METRO M. SAWCHUK, SHEHO											
3C	8	7	B	Marquis.....	19	31	89	9.7	62	3	15.1
..	..	..	..	Ceres.....	21	31	89	9	61	1	15.4
..	..	..	..	Thatcher.....	24	30	89	10	63	1	16.2
..	..	..	..	Reward.....	16	32	88	9.5	64	1	17.6
Significant Difference 1.1 bus.											
NORMAN MEEBERG, PREECEVILLE											
3C	8	8	A	Marquis.....	23	38	96	10	63	1 Hd.	13.5
..	..	..	..	Ceres.....	25	38	97	10	64	1 Hd.	14.7
..	..	..	..	Thatcher.....	26	36	94	10	63.5	1 Hd.	15.4
..	..	..	..	Reward.....	22	39	95	9	65	1 Hd.	17.9
Significant Difference .41 bus.											
FRANK E. A. TANNER, HINCHLIFFE											
4A	8	8	B	Marquis.....	25	31	90	10	63	2	9.3
..	..	..	..	Ceres.....	20	28	84	9.8	64	3	10.3
..	..	..	..	Thatcher.....	20	28	85	10	64	1	10.3
..	..	..	..	Reward.....	14	29	83	9.5	66	1 Hd.	10.6
Significant Difference 2.5 bus.											
STEPHEN HERMAN KUZIAK, CANORA											
3B	8	9	A	Marquis.....	...	34	...	10	...	..	...
..	..	..	..	Ceres.....	...	35	...	10	...	..	...
..	..	..	..	Thatcher.....	...	32	...	10	...	..	...
..	..	..	..	Reward.....	...	33	...	10	...	..	...
Significant Difference—(no samples received).											
MISS ERNA MAYBELLE IDA MALCOLM, STENEN											
3B	8	9	B	Marquis.....	23	30	105	9.5	63.5	1 Hd.	14.1
..	..	..	..	Ceres.....	20	30	97	8	63	1	15.7
..	..	..	..	Thatcher.....	23	29	97	9.3	64	1 Hd.	15.9
..	..	..	..	Reward.....	15	30	90	7.3	65	1 Hd.	18.0
Significant Difference 2 bus.											

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Dist.	Sub-dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
LOUIS EDWARD FREDERICK JOHN PILGRIM, PELLY											
3B	8	10	A	Marquis.....	36	31	91	10	65	1 Hd.	15.2
"	"	"	"	Ceres.....	42	32	87	10	63	1	15.4
"	"	"	"	Thatcher.....	39	31	85	10	64	1	16.1
"	"	"	"	Reward.....	38	30	85	10	66	1	17.8
Significant Difference .78 bus.											

STANLEY NIMETZ, ARRAN											
3B	8	10	B	Marquis.....	15	29	...	...	58	2	11.6
"	"	"	"	Ceres.....	23	30	...	...	63	1 Hd.	13.1
"	"	"	"	Thatcher.....	28	28	...	...	64	1 Hd.	14.0
"	"	"	"	Reward.....	21	30	...	...	65	1 Hd.	15.7
Significant Difference 1.9 bus.											

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

3C 8 7 A Michael Yawny, Rama

Note.—The figures and letters preceding name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

WHEAT POOL DISTRICT 9

Cereal variety zone	Dist.	Sub-dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
ROBERT IRVING GILL, JASMIN											
3C	9	1	A	Marquis.....	25	30	...	10	63	1	16.1
"	"	"	"	Ceres.....	28	30	...	10	63	1	17.0
"	"	"	"	Thatcher.....	31	31	...	10	63.5	1	16.3
"	"	"	"	Reward.....	18	30	...	10	64	1	18.0
Significant Difference 2.1 bus.											

WILLIAM GRAY, ITUNA											
3C	9	1	B	Marquis.....	25	28	108	8.8	64	1 Hd.	14.9
"	"	"	"	Ceres.....	26	28	101	8.8	65	1 Hd.	16.1
"	"	"	"	Thatcher.....	28	27	108	9.3	64	1 Hd.	16.1
"	"	"	"	Reward.....	17	28	99	8.0	66	1 Hd.	18.2
Significant Difference 1.9 bus.											

GEORGE TALBOT NEIL. LIPTON											
3C	9	2	A	Marquis.....	22	32	88	9.3	63	1 Hd.	13.6
"	"	"	"	Ceres.....	24	34	88	9.5	63	1 Hd.	14.1
"	"	"	"	Thatcher.....	24	31	88	9	63	1	14.4
"	"	"	"	Reward.....	16	28	87	7.8	64	1 Hd.	15.7
Significant Difference 1.4 bus.											

ALVIN GARFIELD SMITH, CUPAR											
2B	9	2	B	Marquis.....	24	30	92	10	64	1 Hd.	15.9
"	"	"	"	Ceres.....	25	30	89	8	63.5	1 Hd.	16.0
"	"	"	"	Thatcher.....	27	29	92	9	62.5	1 Hd.	16.7
"	"	"	"	Reward.....	17	28	84	7	65	1 Hd.	17.2
Significant Difference 2.6 bus.											

ALBERT EDWARD RUMBALL, SOUTHEY											
2B	9	3	A	Marquis.....	23	24	90	10	61	3	16.9
"	"	"	"	Ceres.....	23	21	88	9.5	62	1	16.8
"	"	"	"	Thatcher.....	26	21	86	9.8	60	3	17.4
"	"	"	"	Reward.....	24	21	84	9.5	64	1	17.2
Significant Difference .72 bus.											

MISS JUDITH LAZAR, LESTOCK											
3C	9	3	B	Marquis.....	47	41	88	10	64	1 Hd.	14.6
"	"	"	"	Ceres.....	52	41	86	10	64	1 Hd.	14.9
"	"	"	"	Thatcher.....	46	38	85	10	63.5	1 Hd.	15.3
"	"	"	"	Reward.....	32	39	84	10	65	1 Hd.	16.3
Significant Difference .63 bus.											

LLOYD NIXON, EARL GREY											
2B	9	4	A	Marquis.....	26	38	91	10	60	3	18.5
"	"	"	"	Ceres.....	28	42	87	10	61	2	17.6
"	"	"	"	Thatcher.....	31	37	84	10	59	3	18.7
"	"	"	"	Reward.....	27	40	82	10	62	2	18.4
Significant Difference .67 bus.											

Individual Summarized Results of All Tests—Continued

WHEAT POOL DISTRICT 10

Cereal variety zone	Dist.	Sub-dist.	Test designa-	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commer-cial grades	Protein content in percentage	
JOHN REYNALDSON, Jr., CHAMBERLAIN											
2B	10	1	A	Marquis.....	22	26	86	10	61	1	16.7
..	..	..	..	Reliance.....	25	26	87	10	61.5	1	15.7
..	..	..	..	Thatcher.....	25	25	87	10	60	1	17.2
..	..	..	..	Reward.....	21	27	79	10	63	1	18.3
Significant Difference 1.6 bus.											
CLAYTON EDGARDSON McWILLIAMS, HOLDFAST											
2B	10	1	B	Marquis.....	17	29	...	...	62	1 Hd.	16.3
..	..	..	..	Reliance.....	18	28	...	...	62.5	1 Hd.	15.9
..	..	..	..	Thatcher.....	20	28	...	...	61	1	16.9
..	..	..	..	Reward.....	11	27	...	...	64	1 Hd.	17.1
Significant Difference .86 bus.											
RICHARD SAMUEL JACKSON, RIVERHURST											
1	10	2	B	Marquis.....	11	21	86	10	60	1	16.2
..	..	..	..	Reliance.....	13	20	85	9	62	1 Hd.	16.0
..	..	..	..	Thatcher.....	13	21	87	9.8	58.5	2	17.4
..	..	..	..	Reward.....	10	21	85	9.8	61.5	1	17.4
Significant Difference 1.1 bus.											
FRED CHAS. MOYNHAM, DEMAINE											
1	10	3	A	Marquis.....	9	19	88	9	57.5	4	16.9
..	..	..	..	Reliance.....	9	15	87	9	59.5	3	16.9
..	..	..	..	Thatcher.....	9	13	85	6.5	59.5	2	17.9
..	..	..	..	Reward.....	8	14	85	7	61	2	18.3
Significant Difference 1.6 bus.											
HARLAN THOMAS EWING, WISETON											
1	10	4	A	Marquis.....	8	...	...	...	57.5	3	18.8
..	..	..	..	Reliance.....	9	...	...	...	59	2	17.9
..	..	..	..	Thatcher.....	10	...	...	...	57	3	19.4
..	..	..	..	Reward.....	8	...	...	...	61	1	19.0
Significant Difference 3.2 bus.											
ROY HILTON BULMER, MILDEN											
2B	10	4	B	Marquis.....	18	24	94	9.5	62	1 Hd.	15.7
..	..	..	..	Reliance.....	19	25	95	9.5	62.5	1 Hd.	15.5
..	..	..	..	Thatcher.....	18	23	94	9.5	59.5	2	16.7
..	..	..	..	Reward.....	13	24	83	9.5	65	1 Hd.	16.8
Significant Difference .12 bus.											
WILLARD JOHN FISHER, BIRSBY											
1	10	5	A	Marquis.....	4	17	...	10	59	2	18.0
..	..	..	..	Reliance.....	7	17	...	10	61	1	17.6
..	..	..	..	Thatcher.....	7	15	...	10	57	3	18.7
..	..	..	..	Reward.....	5	16	...	9.8	59.5	2	18.7
Significant Difference 3.8 bus.											
EARL W. JOHNSTON, CONQUEST											
2B	10	5	B	Marquis.....	11	...	...	...	58	2	18.7
..	..	..	..	Reliance.....	11	...	...	...	59	2	18.7
..	..	..	..	Thatcher.....	14	...	...	...	58	2	18.9
..	..	..	..	Reward.....	11	...	...	...	59.5	2	19.1
Significant Difference 2.3 bus.											
BURTON OLIVER BERG, OUTLOOK											
2B	10	6	B	Marquis.....	14	29	83	9.8	59	2	14.0
..	..	..	..	Reliance.....	17	27	83	9	60	1	13.6
..	..	..	..	Thatcher.....	17	28	81	9.8	61	1	13.8
..	..	..	..	Reward.....	15	29	80	9.3	63	1 Hd.	14.6
Significant Difference .31 bus.											
OSCAR WILLNER, DAVIDSON											
2B	10	7	A	Marquis.....	17	29	82	9.4	59	2	17.0
..	..	..	..	Reliance.....	17	28	81	9.9	59.5	2	17.9
..	..	..	..	Thatcher.....	20	29	81	9	58	2	19.1
..	..	..	..	Reward.....	17	30	79	9.3	62	2	18.6
Significant Difference 1.1 bus.											
MISS EUPHEMIA McARTHUR, WATROUS											
2B	10	8	A	Marquis.....	25	36	79	9.8	61	1	16.0
..	..	..	..	Reliance.....	28	35	82	10	61	1	15.5
..	..	..	..	Thatcher.....	28	35	81	10	60	1	16.3
..	..	..	..	Reward.....	24	35	77	9.5	63	1	16.5
Significant Difference .66 bus.											

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Dist.	Sub-dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
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RAYMOND WILLIAM BUSCHE, IMPERIAL

2B	10	8	B	Marquis.....	8	10	59	2	16.8
..	Reliance.....	12	10	59.5	2	16.0
..	..	..	..	Thatcher.....	31	....	....	10	59	2	17.1
..	..	..	..	Reward.....	27	....	....	10	63	2	17.4

Significant Difference 1.4 bus.

ELMER HERBERT CATTON, HANLEY

2B	10	9	A	Marquis.....	....	19	87	9.5	....	..	....
..	..	..	..	Reliance.....	....	18	88	10	....	..	....
..	..	..	..	Thatcher.....	....	21	85	9.7	....	..	....
..	..	..	..	Reward.....	....	23	83	10	....	..	....

Significant Difference—(No samples received).

LLOYD KEELER STROUTS, HANLEY

2B	10	9	B	Marquis.....	9	22	87	9.8	57	3	18.8
..	..	..	..	Reliance.....	10	21	87	9.6	59	2	18.0
..	..	..	..	Thatcher.....	13	22	87	9.4	57	3	18.8
..	..	..	..	Reward.....	7	23	84	7.0	59	2	18.7

Significant Difference 1.8 bus.

LLOYD GEORGE SCHUMACHER, DONAVON

2B	10	10	A	Marquis.....	11	....	....	....	57	3	16.6
..	..	..	..	Reliance.....	12	....	....	....	59	2	16.5
..	..	..	..	Thatcher.....	14	....	....	....	57.5	3	16.6
..	..	..	..	Reward.....	13	....	....	....	60	2	17.6

Significant Difference 1.3 bus.

STANLEY WILLIAM JACOB WILSON, ARDATH

2B	10	10	B	Marquis.....	....	22	83	9	....	..	13.9
..	..	..	..	Reliance.....	....	22	79	9	60.5	1	11.8
..	..	..	..	Thatcher.....	....	22	80	9	58	2	14.7
..	..	..	..	Reward.....	....	23	79	9	....	..	15.4

Significant Difference—(Samples incomplete).

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

1	10	2	A	Leslie David Wilkinson Cooper, Tugaske	2B	10	6	A	Norman Arnold Tastad, Loreburn
1	10	3	B	Miss Frances Loyst, Demaine	2B	10	7	B	Harold Arthur Storey, Girvin

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

WHEAT POOL DISTRICT 11

Cereal variety zone	Dist.	Sub-dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
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VICTOR ARTHUR BAKER, KYLE

1	11	1	A	Marquis.....	12	24	90	8	58	2	18.5
..	Reliance.....	12	22	90	7.8	58.5	2	18.5
..	..	..	..	Thatcher.....	14	23	90	8.5	56	4	18.9
..	..	..	..	Reward.....	11	24	90	7.7	60	1	18.5

Significant Difference 1.5 bus.

MISS ELEANOR MILDRED AKISTER, TUBEROSE

1	11	1	B	Marquis.....	....	16	87	8.8	62	1 Hd.	15.1
..	..	..	..	Reliance.....	....	16	88	10	63	1 Hd.	15.6
..	..	..	..	Thatcher.....	....	13	87	8.1	61	1	16.8
..	..	..	..	Reward.....	....	12	87	8.3	†	*	18.0

Significant Difference—(considerable bird damage, yields discarded).

EARL ALBERT HARBICHT, HUGHTON

2B	11	2	A	Marquis.....	28	....	....	10	62	1 Hd.	16.8
..	..	..	..	Reliance.....	30	....	....	10	62.5	1 Hd.	16.5
..	..	..	..	Thatcher.....	29	....	....	10	61	1	17.4
..	..	..	..	Reward.....	26	....	....	10	64	1 Hd.	17.4

Significant Difference 1.3 bus.

MORTON ROBB KEELER, PLATO

1	11	2	B	Marquis.....	7	17	92	9	61.5	1	15.8
..	..	..	..	Reliance.....	12	18	90	8	62	1 Hd.	15.7
..	..	..	..	Thatcher.....	14	19	90	8.8	61	1	16.1
..	..	..	..	Reward.....	11	17	90	7.8	63	1 Hd.	16.8

Significant Difference 1.3 bus.

† = Insufficient to weigh.

* = Insufficient to grade.

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Sub-district	Test designation	Varieties	Yield per acre	Plant height in inches	Days seedling to ripe	Straw strength	Pounds per measured bushel	Commercial grades	Protein content in percentage
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ERIC COLLINGE, RICHLEA

1	11	3	A	Marquis.....	14	61	1	16.9
..	Reliance.....	16	61.5	1	16.7
..	Thatcher.....	15	58	2	18.0
..	..	..	..	Reward.....	13	...	...	60	1	17.7

Significant Difference .78 bus.

JAMES C. KELLINGTON, SNIPE LAKE

1	11	3	B	Marquis.....	6	15	96	8.5	61.5	1	17.3
..	..	..	..	Reliance.....	7	16	95	8	61	1	16.3
..	..	..	..	Thatcher.....	7	15	95	8.5	58	2	17.3
..	..	..	..	Reward.....	6	16	95	8	59	2	17.9

Significant Difference 2.4 bus.

SHELDON LEWIS ELLIOTT, FLAXCOMBE

1	11	5	B	Marquis.....	...	11	...	8.5	†	*	19.5
..	..	..	..	Reliance.....	...	11	...	7.8	†	*	18.0
..	..	..	..	Thatcher.....	...	10	...	7	†	*	20.0
..	..	..	..	Reward.....	...	13	...	7.8	†	*	20.0

Significant Difference—(Severe hail damage, yields discarded).

WILLIAM KENNETH SCHMIDT, KINDERSLEY

1	11	6	B	Marquis.....	11	21	85	7.5	58	2	18.6
..	..	..	..	Reliance.....	12	19	84	7.8	60	2	18.1
..	..	..	..	Thatcher.....	13	20	84	8.8	56	4	19.0
..	..	..	..	Reward.....	12	23	79	7.8	59.5	2	18.7

Significant Difference .96 bus.

ROSS JAVENS, ROSETOWN

2B	11	7	A	Marquis.....	19	22	88	9	64	1 Hd.	15.9
..	..	..	..	Reliance.....	22	22	90	10	64	1	15.8
..	..	..	..	Thatcher.....	20	20	86	9	61.5	1	17.0
..	..	..	..	Reward.....	20	19	83	8.2	64	1	17.8

Significant Difference 3.3 bus.

JOHN ALVIN KLEMMER, ANGLIA

2B	11	8	A	Marquis.....	22	29	95	6.8	63	1 Hd.	15.0
..	..	..	..	Reliance.....	25	28	97	6.8	63.5	1 Hd.	14.4
..	..	..	..	Thatcher.....	25	28	93	7.1	61	1	15.9
..	..	..	..	Reward.....	22	27	86	6.3	65	1 Hd.	16.1

Significant Difference .66 bus.

GEO. EARL WILSON, HERSCHEL

1	11	8	B	Marquis.....	5	...	...	...	58	2	18.4
..	..	..	..	Reliance.....	5	...	...	...	59	2	18.2
..	..	..	..	Thatcher.....	6	...	...	...	56	4	19.0
..	..	..	..	Reward.....	6	...	...	...	61	1	18.6

Significant Difference 2.2 bus.

DANIEL ALBIN OLSON, PLENTY

1	11	9	B	Marquis.....	17	18	...	9	64	1 Hd.	15.7
..	..	..	..	Reliance.....	17	16	...	8	64	1 Hd.	15.4
..	..	..	..	Thatcher.....	19	17	...	7	63	1 Hd.	16.6
..	..	..	..	Reward.....	7	14	...	6	65	1 Hd.	17.1

Significant Difference 1.5 bus.

EARL NAFFZIGER, SMILEY

1	11	10	A	Marquis.....	5	12	...	10	61	1	18.3
..	..	..	..	Reliance.....	7	13	...	10	63	1 Hd.	17.0
..	..	..	..	Thatcher.....	6	14	...	10	58	2	18.8
..	..	..	..	Reward.....	4	14	...	8.5	60	1	19.2

Significant Difference 3.3 bus.

WILLIAM ELLIS JAMESON, FUSILIER

1	11	10	B	Marquis.....	9	20	84	10	61	1	17.5
..	..	..	..	Reliance.....	11	19	96	10	62.5	1 Hd.	16.6
..	..	..	..	Thatcher.....	10	20	89	10	59	2	17.4
..	..	..	..	Reward.....	7	21	81	10	62.5	1 Hd.	17.4

Significant Difference 2.4 bus.

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

1	11	4	A	Dyson Revitt, Jr., Eyre	1	11	6	A	Raymond Harold Fuhrmann,
1	11	4	B	William Robt. Bennett, Eatonia					Netherhill
1	11	5	A	Verna Mayer, Alsask	2B	11	7	B	William S. Powell, Rosetown

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

† = Insufficient to weigh.

* = Insufficient to grade.

Individual Summarized Results of All Tests—Continued

WHEAT POOL DISTRICT 12

Cereal variety zone	Sub. dist.	Test design- nation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripe	Straw strength	Pounds per measured bushel	Commercial grades	Protein content in percentage
HUGH ALBERT RIDDELL, SPRINGWATER										
2B	12	1	A Marquis.....	5	10	...	...	63	1 Hd.	14.7
..	..	..	.. Ceres.....	6	10	...	...	63	1 Hd.	14.4
..	..	..	.. Thatcher.....	4	11	...	...	61.5	1	15.4
			Reward.....	4	10	...	...	64	1 Hd.	16.4
Significant Difference 4.5 bus.										
GLEN CARROLL LINDGREN, BIGGAR										
2B	12	1	B Marquis.....	6	20	95	8	59	2	17.6
..	..	..	.. Ceres.....	7	20	94	8.5	59	2	17.7
..	..	..	.. Thatcher.....	8	19	94	8.3	57	3	18.3
			Reward.....	7	18	94	8.5	62	1	18.7
Significant Difference 1.8 bus.										
JAMES PETER SANDERS, SALTER										
2B	12	2	A Marquis.....	11	20	102	8.5	62.5	1 Hd.	15.7
..	..	..	.. Ceres.....	10	20	98	9	63.5	1 Hd.	15.7
..	..	..	.. Thatcher.....	11	19	96	9	61	1	16.4
			Reward.....	9	20	95	7.8	64	1 Hd.	16.9
Significant Difference 1.4 bus.										
STANLEY D. FREWEN, BALJENNIE										
3E	12	2	B Marquis.....	6	18	87	10	58	3	18.8
..	..	..	.. Ceres.....	6	16	87	9.8	61	1	17.9
..	..	..	.. Thatcher.....	6	18	87	9.3	57	2	19.2
			Reward.....	7	19	81	9	63	1 Hd.	18.9
Significant Difference 1.6 bus.										
ERNEST WESLEY SMITH, WILKIE										
2B	12	3	A Marquis.....	8	...	91	8.3	62	1	15.8
..	..	..	.. Ceres.....	11	...	90	8.3	61.5	1	16.0
..	..	..	.. Thatcher.....	11	...	90	8.3	60.5	2	16.5
			Reward.....	6	—	91	8.0	63	1	17.4
Significant Difference 2.4 bus.										
NELLIS ARTHUR SINCLAIR, WOLFE										
2B	12	3	B Marquis.....	...	18	94	5	62.5	1 Hd.	15.1
..	..	..	.. Ceres.....	—	17	93	5.7	63	1 Hd.	15.2
..	..	..	.. Thatcher.....	...	16	90	6	61.5	1	16.2
			Reward.....	...	17	88	5.2	65	1 Hd.	16.7
Significant Difference—(sample incomplete).										
GLENN F. SCHLOSSER, KERROBERT										
2B	12	4	B Marquis.....	7	19	...	9	61	1	16.0
..	..	..	.. Ceres.....	9	20	...	8.8	61	1	15.9
..	..	..	.. Thatcher.....	8	19	...	9	59	2	16.4
			Reward.....	6	19	...	8	61.5	1	17.5
Significant Difference 2.6 bus.										
CONRADE CAMPBELL FEENIE, EYESHAM										
2B	12	6	B Marquis.....	...	20	...	10	61	1	15.6
..	..	..	.. Ceres.....	...	16	...	10	62	1 Hd.	15.4
..	..	..	.. Thatcher.....	...	18	...	10	59	2	16.4
			Reward.....	...	18	...	10	63	1 Hd.	16.9
Significant Difference—(samples incomplete).										
ORVILLE AUGUST NELSON, VERA										
2B	12	7	A Marquis.....	2	10	86	6.7	†	*	16.0
..	..	..	.. Ceres.....	2	11	94	7	†	*	15.3
..	..	..	.. Thatcher.....	3	11	86	7.5	59	2	16.5
			Reward.....	2	10	83	7.5	†	*	16.4
Significant Difference 5.3 bus.										
HAROLD WELLS, MARSDEN										
3E	12	8	A Marquis.....	11	20	86	10	62	1	15.8
..	..	..	.. Ceres.....	13	20	85	10	63	1 Hd.	15.7
..	..	..	.. Thatcher.....	15	19	80	10	61.5	1	16.3
			Reward.....	11	20	77	10	63	1	17.6
Significant Difference 1.4 bus.										
CLEMENT COLLIN WAKEFIELD, LILLYDALE										
3E	12	8	B Marquis.....	...	17	99	9	62	1	16.0
..	..	..	.. Ceres.....	...	16	101	9	61.5	1	16.1
..	..	..	.. Thatcher.....	...	15	100	7	61	1	16.3
			Reward.....	...	13	100	7	63	1	18.6
Significant Difference (Severe hail damage, yields discarded).										

† = Insufficient to weigh.

* = Insufficient to grade.

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Sub- dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
BRUCE EVANS SMITH, BATTLEFORD										
3E	12	10	B	Marquis.....	12	....	9	61.5	1	18.6
..	..	..	..	Ceres.....	12	....	9	62	1 Hd.	18.5
..	..	..	..	Thatcher.....	13	....	9	61	1	18.5
..	..	..	..	Reward.....	11	....	8.8	62.5	1 Hd.	19.2
Significant Difference 1.8 bus.										

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

2B	12	4	A	Robert Burke, Luseland	2B	12	7	B	C. T. Walker, Senlac
2B	12	5	A	Earl Everit Richard, Tako	3E	12	9	A	Ellsworth Bingham Woodward, Tatsfield
2B	12	5	B	Harold Bertram Taylor, Reward	2B	12	9	B	Gerald William Wehrhahn, Rockhaven
2B	12	6	A	Robt. Cornelius Thompson, Cactus Lake	3E	12	10	A	William James Bridge, Battleford

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

WHEAT POOL DISTRICT 13

Cereal variety zone	Sub- dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in percentage
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WILLIAM GRAY GIBB, VISCOUNT

2B	13	1	A	Marquis.....	35	8	61	1	14.9
..	Ceres.....	34	8	61.5	1	15.0
..	Thatcher.....	31	7	61	1	15.6
..	..	..	..	Reward.....	....	33	....	5	64	1 Hd.	16.0

Significant Difference—(Samples incomplete).

THOMAS NOEL CRANE, GUERNSEY

2B	13	1	B	Marquis.....	28	....	90	7.5	64	1 Hd.	14.8
..	..	..	..	Ceres.....	31	....	93	9.3	64	1 Hd.	14.7
..	..	..	..	Thatcher.....	27	....	91	9	63	1 Hd.	14.7
..	..	..	..	Reward.....	34	....	89	8.3	65	1 Hd.	16.4

Significant Difference 2.9 bus.

REAY RODDICK, COLONSAY

2B	13	2	A	Marquis.....	10	28	91	9	62	1 Hd.	15.8
..	..	..	..	Ceres.....	14	30	91	9	63	1 Hd.	15.4
..	..	..	..	Thatcher.....	9	26	89	7.5	60	1	17.3
..	..	..	..	Reward.....	8	26	87	8.3	62	1 Hd.	17.3

Significant Difference 2.9 bus.

HARRY BENTON, WATROUS

2B	13	2	B	Marquis.....	14	17	....	5.3	63	1 Hd.	14.8
..	..	..	..	Ceres.....	14	17	....	5.3	63	1 Hd.	14.5
..	..	..	..	Thatcher.....	11	17	....	5	62	1 Hd.	15.5
..	..	..	..	Reward.....	11	18	....	5.3	64	1 Hd.	16.0

Significant Difference 2.4 bus.

WILLIAM GEORGE BITZ, ALLAN

2B	13	3	A	Marquis.....	2	....	....	....	†	1	16.0
..	..	..	..	Ceres.....	2	....	....	....	†	2	15.7
..	..	..	..	Thatcher.....	2	....	....	....	†	2	15.8
..	..	..	..	Reward.....	1	....	....	....	†	2	16.7

Significant Difference .79 bus.

CHARLES HORTEN HIRAM HOKANSON, DUNDURN

2B	13	3	B	Marquis.....	12	21	86	8.5	58	2	18.9
..	..	..	..	Ceres.....	11	23	87	7.3	58	2	18.1
..	..	..	..	Thatcher.....	13	22	89	8.3	55	4	18.8
..	..	..	..	Reward.....	9	22	89	8.3	58	2	19.2

Significant Difference 1.1 bus.

RALPH WENHAM DUNSTER, BLUCHER

2B	13	4	A	Marquis.....	9	22	85	9.5	61.5	1	16.9
..	..	..	..	Ceres.....	10	21	85	9	61	1	17.0
..	..	..	..	Thatcher.....	10	21	85	10	60	1	17.9
..	..	..	..	Reward.....	7	20	84	8.3	62	2	17.9

Significant Difference 1.1 bus.

† = Insufficient to weigh.

* = Insufficient to grade.

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Sub- zone	Dist.	Sub- dist.	Test designa- nation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in per- centage
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WALTER THOMAS MAGILL, R. R. No. 5, SASKATOON

2B	13	4	B	Marquis.....	16	86	8	12.5
..	Ceres.....	17	80	6.3	13.8
..	..	..	..	Thatcher.....	17	86	8	...	...	..	14.1
..	..	..	..	Reward.....	18	79	5.5	...	...	..	15.3

Significant Difference (Extensive drought damage, yields discarded).

F. L. WALDNER, LANGHAM

2B	13	5	A	Marquis.....	11	...	...	...	63	1 Hd.	16.0
..	..	..	..	Ceres.....	12	...	...	...	63	1 Hd.	16.4
..	..	..	..	Thatcher.....	11	...	...	...	62.5	1 Hd.	16.4
..	..	..	..	Reward.....	7	...	...	...	63	1 Hd.	17.9

Significant Difference 3.5 bus.

JOHN HARVEY GWYNNE SMITH, DELISLE

2B	13	5	B	Marquis.....	10	23	88	6.8	57	3	18.1
..	..	..	..	Ceres.....	12	24	82	8.8	59	2	17.1
..	..	..	..	Thatcher.....	15	23	84	9	58	2	18.7
..	..	..	..	Reward.....	10	24	77	9.5	61	2	18.7

Significant Difference 1.7 bus.

CARL ALFRED BREMER, PERDUE

2B	13	6	A	Marquis.....	8	...	...	9	58	2	17.9
..	..	..	..	Ceres.....	9	...	...	9	58	2	17.6
..	..	..	..	Thatcher.....	9	...	...	9	58	2	17.9
..	..	..	..	Reward.....	6	...	...	8.8	62	1	17.9

Significant Difference 3.5 bus.

JOHN KENNETH CONN, ABERDEEN

2B	13	7	A	Marquis.....	15	28	87	10	60	1	17.3
..	..	..	..	Ceres.....	13	29	85	8.3	61	1	17.0
..	..	..	..	Thatcher.....	16	28	85	10	59	2	18.0
..	..	..	..	Reward.....	18	26	79	9	62	1	17.6

Significant Difference 1.4 bus.

NORMAN GARFIELD HUFFMAN, ABERDEEN

2B	13	7	B	Marquis.....	25	28	89	8.8	63	1 Hd.	13.2
..	..	..	..	Ceres.....	26	27	89	9.3	65	1 Hd.	14.4
..	..	..	..	Thatcher.....	32	28	89	9.5	63.5	1 Hd.	16.6
..	..	..	..	Reward.....	21	28	89	10	66	1 Hd.	15.5

Significant Difference .22 bus.

J. E. BLAIN, PRUD'HOMME

2B	13	8	A	Marquis.....	12	25	84	9.8	59	2	18.1
..	..	..	..	Ceres.....	13	24	84	10	60	1	17.2
..	..	..	..	Thatcher.....	12	25	80	9.8	57.5	3	18.7
..	..	..	..	Reward.....	12	25	80	9.3	63	1	18.1

Significant Difference 1.2 bus.

MATT P. YANCIW, LEOFNARD

3E	13	9	B	Marquis.....	8	...	...	9.3	61	1	17.8
..	..	..	..	Ceres.....	8	...	...	9.4	59	2	18.3
..	..	..	..	Thatcher.....	12	...	...	9.8	58	2	18.2
..	..	..	..	Reward.....	6	...	...	8.8	58.5	2	18.8

Significant Difference 3.0 bus.

JEROME PITZEL, PILGER

3C	13	10	A	Marquis.....	30	35	98	10	65	1	13.7
..	..	..	..	Ceres.....	30	34	94	9	65	1	14.1
..	..	..	..	Thatcher.....	34	31	94	10	65	1	14.8
..	..	..	..	Reward.....	27	32	87	8	66.5	1 Hd.	16.0

Significant Difference 1.4 bus.

RICHARD X. PROKOSCH, MARYSBURG

3C	13	10	B	Marquis.....	33	30	110	9	64	1 Hd.	14.5
..	..	..	..	Ceres.....	35	30	107	9	64	1 Hd.	14.4
..	..	..	..	Thatcher.....	39	30	106	9	63	1 Hd.	14.8
..	..	..	..	Reward.....	25	36	106	8	65	1 Hd.	16.4

Significant Difference 1.6 bus.

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

2B	13	6	B	Arthur Wilkins, Arelee	2B	13	8	B	Anthony Hillary LaBrash, Totzke
3E	13	9	A	Homer Comegys, Wakaw					

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

Individual Summarized Results of All Tests—Continued

WHEAT POOL DISTRICT 14

Cereal variety zone	Dist.	Sub- dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripe	Straw strength	Pounds per measured bushel	Commercial grades	Protein content in percentage
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OLE J. TROBAK, LINTLAW

4A	14	1	A	Marquis.....	...	47	108	9.5	60	1	12.1
"	"	"	"	Garnet.....	...	44	108	10	64.5	1 Hd.	13.6
"	"	"	"	Thatcher.....	...	45	105	7.5	66	1 Hd.	14.9
Significant Difference—(samples incomplete).											

WALTER FORD, KELVINGTON

3C	14	1	B	Marquis.....	32	35	100	8	61.5	1	13.9
"	"	"	"	Garnet.....	13	33	86	9	61.5	2 C.W.	13.0
"	"	"	"	Thatcher.....	40	32	95	8.3	63	1	16.0
"	"	"	"	Reward.....	33	32	90	7	65	2	16.5

Significant Difference 1.2 bus.

CHARLES WILLIAM MacDONALD, PASWEGIN

3C	14	2	A	Marquis.....	25	...	7.5	61	1	14.4
"	"	"	"	Garnet.....	23	...	7	†	*	13.7
"	"	"	"	Thatcher.....	26	...	7.3	64	1 Hd.	15.5
"	"	"	"	Reward.....	25	...	7	65	1 Hd.	16.7

Significant Difference—(Garnet wheat severely damaged, yields rejected).

EMIL THEODORE BENSON, MARGO

3C	14	2	B	Marquis.....	26	37	94	10	62	1 Hd.	14.8
"	"	"	"	Garnet.....	21	35	87	9.5	61	2 C.W.	14.5
"	"	"	"	Thatcher.....	30	34	93	9.3	64	1 Hd.	16.4
"	"	"	"	Reward.....	24	36	91	9	64	2	16.7

Significant Difference 1.4 bus.

JAMES RICHARD HAROURT, LEROY

3C	14	3	A.	Marquis.....	20	32	...	9	63	1 Hd.	13.8
"	"	"	"	Garnet.....	11	30	...	5.3	61.5	1 C.W.	14.2
"	"	"	"	Thatcher.....	25	31	...	8.8	64	1 Hd.	15.5
"	"	"	"	Reward.....	16	31	...	7.5	66	1 Hd.	16.1

Significant Difference 2.4 bus.

ELVIN OSCAR NABSETH, ROMANCE

3C	14	3	B	Marquis.....	30	100	9	63	1 Hd.	13.9
"	"	"	"	Garnet.....	27	97	6.8	62	1 C.W.	14.0
"	"	"	"	Thatcher.....	28	98	8.5	63	1 Hd.	15.9
"	"	"	"	Reward.....	25	97	8.5	66.5	1 Hd.	16.7

Significant Difference—(samples incomplete).

MARK RICHARD KILCHER, DAYLESFORD

3C	14	4	A	Marquis.....	17	24	...	9	62.5	1 Hd.	16.0
"	"	"	"	Garnet.....	15	24	...	8	60	1 C.W.	14.2
"	"	"	"	Thatcher.....	20	24	...	9	62.5	1 Hd.	15.4
"	"	"	"	Reward.....	17	25	...	8.3	64	1 Hd.	14.1

Significant Difference 2.4 bus.

TONY M. MESCHISHNICK, ST. GREGOR

3C	14	4	B	Marquis.....	30	33	95	9.8	62	1 Hd.	13.5
"	"	"	"	Garnet.....	27	32	90	8.8	61	1 C.W.	13.0
"	"	"	"	Thatcher.....	35	33	94	9.8	63	1 Hd.	14.0
"	"	"	"	Reward.....	27	34	92	9.3	65	1 Hd.	15.2

Significant Difference 1.2 bus.

ROBERT JOHN HUTCHISON, SPALDING

3C	14	5	A	Marquis.....	...	97	9	†	*	14.5
"	"	"	"	Garnet.....	...	98	9	†	*	13.9
"	"	"	"	Thatcher.....	...	99	9	†	*	15.6
"	"	"	"	Reward.....	...	100	9	†	*	15.7

Significant Difference—(samples incomplete).

ALFRED SCOTT-COYLE, PLEASANTDALE

4A	14	5	B	Marquis.....	22	32	105	8.3	59	2	11.4
"	"	"	"	Garnet.....	22	31	89	7	60	1 C.W.	11.3
"	"	"	"	Thatcher.....	33	29	101	7.8	65	1 Hd.	13.4
"	"	"	"	Reward.....	26	28	95	6.3	64	1 Hd.	13.6

Significant Difference .49 bus.

JOHN WEBER, McKAGUE

4A	14	6	B	Marquis.....	10	21	88	6.5	61	1	16.0
"	"	"	"	Garnet.....	13	23	88	6	61	1 C.W.	14.7
"	"	"	"	Thatcher.....	13	18	94	7	62	1	16.4
"	"	"	"	Reward.....	12	21	88	7.3	65	1 Hd.	16.6

Significant Difference 1.3 bus.

† = Insufficient to weigh.

* = Insufficient to grade.

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Dist.	Sub-dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commercial grades	Protein content in percentage
ARCHIE TAYLOR GROAT, ETHELTON											
3D	14	7	A	Marquis.....	6	28	100	10	61	2	14.6
"	"	"	"	Garnet.....	8	22	96	7	60	2 C.W.	14.4
"	"	"	"	Thatcher.....	7	24	98	9	63	1	16.0
"	"	"	"	Reward.....	5	25	96	8	64	1	16.6

Significant Difference 3.3 bus.

JAMES EDGAR SMYLINE, STAR CITY											
3D	14	7	B	Marquis.....	27	26	91	10	65	1 Hd.	11.2
"	"	"	"	Garnet.....	27	25	84	10	64	1 C.W.	11.8
"	"	"	"	Thatcher.....	32	25	89	10	65	1 Hd.	12.4
"	"	"	"	Reward.....	27	25	84	10	67	1 Hd.	13.6

Significant Difference .33 bus.

RONALD STEWART PEARCE, TISDALE											
3D	14	8	A	Marquis.....	30	....	....	6.8	66	1 Hd.	14.4
"	"	"	"	Garnet.....	31	....	....	5.5	64	1 C.W.	15.1
"	"	"	"	Thatcher.....	35	....	....	7	65	1 Hd.	16.3
"	"	"	"	Reward.....	27	....	....	6	66	1 Hd.	17.4

Significant Difference 1.4 bus.

EDWIN VINCENT WRIGHT, TISDALE											
3D	14	8	B	Marquis.....	19	25	91	8	63.5	1 Hd.	13.8
"	"	"	"	Garnet.....	15	21	83	9	64.5	1 C.W.	15.1
"	"	"	"	Thatcher.....	21	22	91	9	64	1 Hd.	15.2
"	"	"	"	Reward.....	13	22	89	9	66	1 Hd.	17.9

Significant Difference 1.3 bus.

EDWARD DOUGLAS ALLEN, NEW OSCOODE											
3D	14	9	A	Marquis.....	22	....	90	8	63	2	10.3
"	"	"	"	Garnet.....	21	....	80	10	65	1 C.W.	10.7
"	"	"	"	Thatcher.....	22	....	87	9	64	1	10.7
"	"	"	"	Reward.....	18	....	82	10	66.5	1 Hd.	12.2

Significant Difference .99 bus.

HAROLD ERNEST WALL, PONTRILAS											
3D	14	10	A	Marquis.....	44	34	....	6.5	63.5	4	13.8
"	"	"	"	Garnet.....	42	31	....	8.8	64	1 C.W.	13.2
"	"	"	"	Thatcher.....	53	31	....	8	63	4	15.5
"	"	"	"	Reward.....	38	33	....	7	66	1	16.7

Significant Difference .89 bus.

BERT EDWARD MATTINSON, PONTRILAS											
3D	14	10	B	Marquis.....	22	31	....	9.8	63	3	13.6
"	"	"	"	Garnet.....	21	23	....	8.5	64	1 C.W.	14.1
"	"	"	"	Thatcher.....	27	26	....	9.5	63	3	14.9
"	"	"	"	Reward.....	19	25	....	8.5	66	1	16.5

Significant Difference 1.1 bus.

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

3C 14 6 A Clayton Albert Angell, Rose Valley 3D 14 9 B Richard Ernest Howes, New Osgoode

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

WHEAT POOL DISTRICT 15

Cereal variety zone	Dist.	Sub-dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per measured bushel	Commercial grades	Protein content in percentage
WILLIAM GEORGE AYLES, TIGER HILLS											
3E	15	1	B	Marquis.....	25	30	90	10	61.5	2	17.2
"	"	"	"	Garnet.....	28	30	83	9.3	60.5	2 C.W.	16.3
"	"	"	"	Thatcher.....	27	29	86	10	60.5	2	16.9
"	"	"	"	Reward.....	28	31	83	9.8	64.5	1	17.1

Significant Difference 1.0 bus.

SIDNEY DE VRIES, PRINCE ALBERT											
3E	15	2	B	Marquis.....	14	....	....	10	62	1	17.5
"	"	"	"	Garnet.....	19	....	....	10	61	2 C.W.	17.0
"	"	"	"	Thatcher.....	19	....	....	10	60	2	17.5
"	"	"	"	Reward.....	17	....	....	9.8	63	2	17.7

Significant Difference 1.3 bus.

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Dist.	Sub. dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds measured per bushel	Commer-cial grades	Protein content in per-cent
FRANCOIS BLANCHARD, Jr., DUCK LAKE											
3E	15	3	A	Marquis.....	13	....	....	10	63	1 Hd.	14.6
"	"	"	"	Garnet.....	9	....	....	10	61	1 C.W.	16.4
"	"	"	"	Thatcher.....	12	....	....	10	61	1	15.6
"	"	"	"	Reward.....	10	....	....	10	63.5	1 Hd.	16.4
Significant Difference 4.3 bus.											
GEORGE MITCHELL, Jr., BUTTERBY											
3E	15	3	B	Marquis.....	9	24	86	9	57	3	14.7
"	"	"	"	Garnet.....	8	18	82	9	57	3	15.3
"	"	"	"	Thatcher.....	10	20	84	9	57.5	3	15.1
"	"	"	"	Reward.....	9	18	82	8	60	2	15.6
Significant Difference 1.5 bus.											
EDWARD LEWIS TADEI, ROSTHORN											
3E	15	4	A	Marquis.....	21	30	92	10	63	1 Hd.	15.6
"	"	"	"	Garnet.....	20	26	84	10	60	1 C.W.	15.3
"	"	"	"	Thatcher.....	22	29	89	10	62	2	16.7
"	"	"	"	Reward.....	20	32	86	10	63	1	17.0
Significant Difference 1.2 bus.											
ROBERT ARTHUR RICKMAN, ROSTHORN											
3E	15	4	B	Marquis.....	27	28	94	10	63	1 Hd.	14.0
"	"	"	"	Garnet.....	24	25	87	8.3	60.5	2 C.W.	14.1
"	"	"	"	Thatcher.....	32	27	90	9	62	2	14.6
"	"	"	"	Reward.....	23	27	90	9	65	1 Hd.	16.0
Significant Difference 1.4 bus.											
STUART JAMES LEASK, MARCELIN											
3E	15	5	A	Marquis.....	20	27	89	10	63	2	14.6
"	"	"	"	Garnet.....	15	24	89	10	62	2 C.W.	15.0
"	"	"	"	Thatcher.....	23	25	89	10	61	2	15.7
"	"	"	"	Reward.....	14	26	89	10	64	2	16.9
Significant Difference 2.7 bus.											
CHARLES EDWARD LEASK, MARCELIN											
3E	15	5	B	Marquis.....	18	....	....	10	63	1 Hd.	16.0
"	"	"	"	Garnet.....	18	....	....	10	61	1 C.W.	16.0
"	"	"	"	Thatcher.....	19	....	....	10	61	1	16.4
"	"	"	"	Reward.....	15	....	....	10	64	1	17.6
Significant Difference 1.1 bus.											
ROBERT EDGAR WOOD, LADDER VALLEY											
4B	15	6	B	Marquis.....	27	33	96	10	63	1	10.9
"	"	"	"	Garnet.....	33	32	94	9.5	64	1 C.W.	12.1
"	"	"	"	Thatcher.....	32	29	95	10	64	1 Hd.	12.3
"	"	"	"	Reward.....	27	30	94	10	65	1 Hd.	14.7
Significant Difference 2.1 bus.											
GEORGE BARTLEY, CAMEO											
3E	15	7	A	Marquis.....	21	26	....	7	61	1	11.7
"	"	"	"	Garnet.....	37	29	....	7.8	63	1 C.W.	13.3
"	"	"	"	Thatcher.....	35	28	....	10	62.5	1	14.5
"	"	"	"	Reward.....	33	29	....	9	65	1 Hd.	15.6
Significant Difference 1.7 bus.											
DOUGLAS KELL, CANWOOD											
3E	15	7	B	Marquis.....	21	28	94	9.5	63	1	11.6
"	"	"	"	Garnet.....	21	24	91	9.5	63	1 C.W.	11.9
"	"	"	"	Thatcher.....	26	27	96	9.5	64	1	12.3
"	"	"	"	Reward.....	18	23	92	9.5	65	1 Hd.	14.0
Significant Difference 2.0 bus.											
FREDERICK HAROLD PUGH, WILD ROSE											
3E	15	8	A	Marquis.....	29	34	99	9.3	64	1 Hd.	13.5
"	"	"	"	Garnet.....	27	31	88	7.6	63	1 C.W.	13.5
"	"	"	"	Thatcher.....	35	30	99	9	64	1	14.0
"	"	"	"	Reward.....	28	32	91	8	66	1 Hd.	14.8
Significant Difference 2.1 bus.											
WILFRED TERENCE MARTIN, HOLBEIN											
3E	15	8	B	Marquis.....	34	36	102	9.3	59.5	2	12.1
"	"	"	"	Garnet.....	38	34	94	8.8	63	1 C.W.	12.1
"	"	"	"	Thatcher.....	43	34	102	9.3	62.5	1	13.5
"	"	"	"	Reward.....	33	35	95	9.3	66	1 Hd.	15.1
Significant Difference .76 bus.											

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Dist.	Sub- dist.	Test design- nation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in per- centage
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DAVID SINCLAIR MITCHELL, WHITE STAR

3E	15	9	A	Marquis.....	33	34	96	8.8	64	1 Hd.	14.4
"	"	"	"	Garnet.....	35	33	90	9.5	65	1 C.W.	13.4
"	"	"	"	Thatcher.....	43	32	96	9	65	1 Hd.	15.0
"	"	"	"	Reward.....	33	32	94	8.8	66.5	1 Hd.	16.0

Significant Difference 2.2 bus.

THEODORE PACZAY, PADDOCKWOOD

3D	15	9	B	Marquis.....	37	31	104	10	65	1 Hd.	13.1
"	"	"	"	Garnet.....	41	33	93	10	65.5	1 C.W.	13.1
"	"	"	"	Thatcher.....	48	32	104	10	65	1 Hd.	14.3
"	"	"	"	Reward.....	33	32	101	10	66.5	1 Hd.	15.9

Significant Difference .35 bus.

ROBERT BEVERLEY BEATTIE, KINISTINO

3D	15	10	A	Marquis.....	21	28	95	6.5	65	1 Hd.	14.5
"	"	"	"	Garnet.....	20	28	86	6.3	64	1 C.W.	15.0
"	"	"	"	Thatcher.....	23	25	90	7.5	64	1 Hd.	15.4
"	"	"	"	Reward.....	19	27	91	8.8	66	1 Hd.	16.6

Significant Difference 1.5 bus.

PAUL J. NABER, WHITTOME

3D	15	10	B	Marquis.....	19	31	97	8.8	65	1 Hd.	14.0
"	"	"	"	Garnet.....	16	27	92	8	64	1 C.W.	14.3
"	"	"	"	Thatcher.....	19	30	95	9	65	1 Hd.	15.1
"	"	"	"	Reward.....	16	28	92	8.8	66.5	1 Hd.	16.2

Significant Difference .86 bus.

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

3D 15 1 A John Bernard Boyle, Kinistino 3E 15 2 A Philip Parsen, Red Deer Hill
3E 15 6 A Mervin Leslie Madsen, Avebury

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

WHEAT POOL DISTRICT 16

Cereal variety zone	Dist.	Sub- dist.	Test design- nation	Varieties	Yield bus. per acre	Plant height in inches	Days seed- ing to ripe	Straw strength	Pounds per measured bushel	Commer- cial grades	Protein content in per- centage
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GLEN H. LAYMAN, SPEERS

3E	16	2	B	Marquis.....	18	29	...	8.8	62	1 Hd.	17.2
"	"	"	"	Garnet.....	18	27	86	6.5	60	1 C.W.	17.0
"	"	"	"	Thatcher.....	21	27	...	7.3	61	1	15.8
"	"	"	"	Reward.....	21	29	86	6.8	65	1 Hd.	17.0

Significant Difference 1.1 bus.

DONALD WRIGHT HUMPHREYS, IFFLEY

3E	16	3	A	Marquis.....	8	19	86	9.5	61	1	18.4
"	"	"	"	Garnet.....	9	20	82	8	60	1 C.W.	18.1
"	"	"	"	Thatcher.....	12	20	85	9.3	60	1	17.2
"	"	"	"	Reward.....	8	21	84	8.3	61.5	1	18.0

Significant Difference 2.9 bus.

GEORGE HAMBLY, NORTH BATTLEFORD

3E	16	3	B	Marquis.....	8	...	...	...	60	1	18.4
"	"	"	"	Garnet.....	5	...	...	...	58	2 C.W.	18.4
"	"	"	"	Thatcher.....	7	...	...	...	58.5	2	17.5
"	"	"	"	Reward.....	7	...	...	...	62	1	18.1

Significant Difference 1.9 bus.

DOUGLAS GORDON EDGELOW, CAVALIER

3E	16	4	A	Marquis.....	5	...	...	...	58	2	19.6
"	"	"	"	Garnet.....	5	...	...	...	56	4	20.0
"	"	"	"	Thatcher.....	4	...	...	...	56	4	19.4
"	"	"	"	Reward.....	4	...	...	...	60	2	19.2

Significant Difference 1.0 bus.

MISS IRENE GRANT, EDAM

3E	16	4	B	Marquis.....	12	21	96	...	62.5	1 Hd.	18.2
"	"	"	"	Garnet.....	11	17	89	...	61	2 C.W.	18.6
"	"	"	"	Thatcher.....	14	21	95	...	61	1	18.9
"	"	"	"	Reward.....	11	19	91	...	63	1	19.7

Significant Difference 1.4 bus.

Individual Summarized Results of All Tests—Continued

Cereal variety zone	Sub- zone	Dist.	Sub- dist.	Test designation	Varieties	Yield bus. per acre	Plant height in inches	Days seed-ing to ripe	Straw strength	Pounds per bushel measured	Commercial grades	Protein content in percentage
GILBERT HENRY WESSON, MAIDSTONE												
3E	16	5	A	Marquis.....	24	....	....	9.3	64	1 Hd.	15.7
"	"	"	"	Garnet.....	20	....	....	4.3	61	1 C.W.	15.4
"	"	"	"	Thatcher.....	25	....	....	9.3	62.5	1 Hd.	16.2
"	"	"	"	Reward.....	21	....	....	8.5	65	1 Hd.	17.3
Significant Difference 1.1 bus.												
JAMES A. RICHARDS, LASHBURN												
3E	16	6	A	Marquis.....	15	24	106	8.5	62	1	16.0	
"	"	"	"	Garnet.....	19	24	100	8.8	63	1 C.W.	15.6	
"	"	"	"	Thatcher.....	18	23	102	8.8	62	1 Hd.	16.1	
"	"	"	"	Reward.....	16	24	100	8.8	65	1 Hd.	17.3	
Significant Difference 1.5 bus.												
FRANK JOHN SUTTON, MARSHALL												
3E	16	6	B	Marquis.....	15	26	....	7.3	63	1 Hd.	15.2
"	"	"	"	Garnet.....	14	25	....	5.5	60	2 C.W.	14.6
"	"	"	"	Thatcher.....	16	25	....	5.3	61	1	15.7
"	"	"	"	Reward.....	9	25	....	5.5	63	1	17.3
Significant Difference 2.7 bus.												
WESLEY SIMPSON, PARADISE HILL												
3E	16	7	B	Marquis.....	....	17	....	8.7	61.5	1	15.7
"	"	"	"	Garnet.....	....	15	....	7.7	60	1 C.W.	16.0
"	"	"	"	Thatcher.....	....	15	....	8.3	60.5	1	16.3
"	"	"	"	Reward.....	....	17	....	8.7	63.5	1 Hd.	16.8
Significant Difference—(samples incomplete).												
LLOYD GEORGE PROCTOR, MERVIN												
3E	16	8	A	Marquis.....	....	26	84	7.8	63.5	1 Hd.	15.1
"	"	"	"	Garnet.....	....	26	83	8	62	1 C.W.	14.9
"	"	"	"	Thatcher.....	....	24	83	7	61.5	1	16.6
"	"	"	"	Reward.....	....	25	83	7.3	63	1	18.3
Significant Difference—(Considerable hail damage, yields discarded).												
JAMES G. COCKBURN, TURTLEFORD												
3E	16	8	B	Marquis.....	20	31	96	7	63	1 Hd.	17.8	
"	"	"	"	Garnet.....	16	29	85	8.8	62.5	1 C.W.	17.5	
"	"	"	"	Thatcher.....	20	28	85	8	62	1 Hd.	18.3	
"	"	"	"	Reward.....	17	27	92	6.5	64	1 Hd.	18.7	
Significant Difference 2.1 bus.												
JOHN HENRY McDONALD, EAST ANGLIA												
4B	16	9	A	Marquis.....	5	....	....	....	62.5	1 Hd.	16.2
"	"	"	"	Garnet.....	6	....	....	....	61	1 C.W.	17.7
"	"	"	"	Thatcher.....	6	....	....	....	62	1 Hd.	16.6
"	"	"	"	Reward.....	5	....	....	....	62	2	17.4
Significant Difference 3.9 bus.												
RALPH YOUNG, EAST ANGLIA												
4B	16	9	B	Marquis.....	6	26	....	....	64	1 Hd.	14.1
"	"	"	"	Garnet.....	9	24	....	....	62	1 C.W.	14.4
"	"	"	"	Thatcher.....	6	21	....	....	62	1 Hd.	15.4
"	"	"	"	Reward.....	7	26	....	....	64	1 Hd.	16.0
Significant Difference 3.9 bus.												
JOHNNIE UNRAU, MULLINGAR												
3E	16	10	A	Marquis.....	9	....	....	8.8	64	1 Hd.	15.8
"	"	"	"	Garnet.....	8	....	....	8.5	62	1 C.W.	16.5
"	"	"	"	Thatcher.....	8	....	....	8.5	61.5	1	17.8
"	"	"	"	Reward.....	7	....	....	8.3	65	1 Hd.	18.2
Significant Difference 2.5 bus.												
THOMAS HAROLD LATUS, BAPAUME												
4B	16	10	B	Marquis.....	....	20	91	9	63	1 Hd.	17.4
"	"	"	"	Garnet.....	....	22	86	8	61	1 C.W.	17.3
"	"	"	"	Thatcher.....	....	19	89	9	62	1 Hd.	18.3
"	"	"	"	Reward—	....	22	89	8.5	64	1 Hd.	18.7
Significant Difference—(severe hail damage, yields discarded).												

Tests Discarded on Account of Severe Damage by Drought, Pests, Hail, or Other Causes

3E 16 1 A Lawrence Ernest McKellar, Radis-3E 16 2 A Edward Philip Hudek, Hafford son 3E 16 5 B John Angus Currie, Bresaylor

3E 16 1 B Chester Lloyd Ferris, Fielding 3E 16 7 A Norman Preece, Bolney

Note.—The figures and letters before each name represent, in order, the Cereal Variety Zone, the District, Sub-District, and Test Designation.

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